

Current Events

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‘Rain - too much is just as bad as not enough.’

Recently, I flew back to Molokai from Honolulu and couldn't believe my eyes. I was so focused on the rivers overflowing into the ocean that I didn't realize it had to start from somewhere. All the rivers originating from the West Molokai Mountain were flowing. They ***never*** flow.

Slow moving storms originating from the West were hooking into Molokai from a southerly direction, coming in low and sitting on the Hoolehua plains, just pummeling us for hours. It's as if they got stuck in the terrain and couldn't move, unloading anywhere from 2 to 5 inches every 5-7 days. This went on for over a month, and it's my estimation that we probably received between 20-25 inches in January alone. By February, we probably received close to half of our annual rainfall!



West Molokai, near the Kaluakoi Hotel

I contacted the Weather Service and they recorded 17 inches for the month of January for one of the rainiest places on Molokai, Puu Ali'i on the East Molokai mountains, but this was a fraction of what was really falling in other parts. It seemed like West Molokai and Hoolehua got the brunt of the storms. If you viewed the National Weather Service radar photos, it was a weekly instant replay and the weather was stuck in this pattern for a whole month. If this is not climate change, then I don't know what is. I spoke to a guy



Ranch Mo'omomi, owned by the Nature Conservancy

who lives in Wailau Valley, on the North Shore of Molokai, and he mentioned that they had 15 inches in the first seven days of February alone! After weeks of this kind of weather, this island is an environmental and ecological disaster, as seen by these pictures, and I wonder what the long-term impact is going to be for the crops, the near shore wildlife that we depend on for food, and the island as a whole.



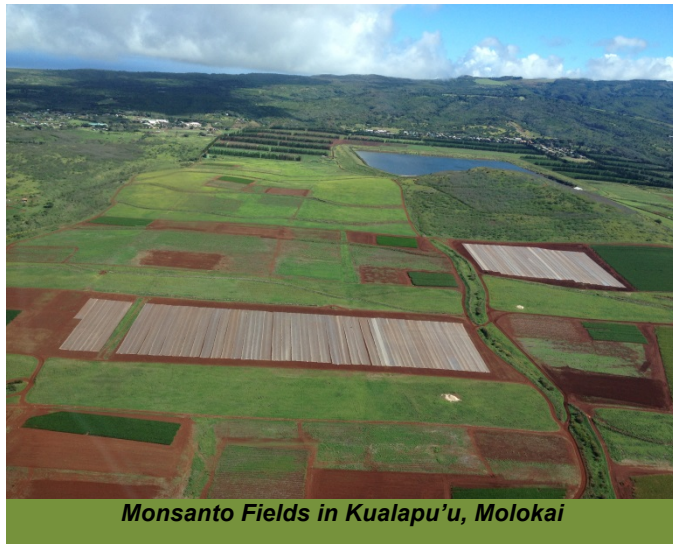
South West Molokai, Kaunala to Kaupoa

One of the concerns is the leaching and washing away of agricultural nutrients, including both organic and conventional fertilizer. The loss of costly plant nutrients will need to be replaced, but what are the impacts of these nutrients in the ocean? Nutrient imbalances definitely create an adverse effect on the near-shore environment by favoring one species over another and creating imbalances that we don't fully understand.

Lessons learned from these events are that we need to be more proactive in managing our lands, creating retaining basins, grass waterways, and berms to keep our soil from washing away. Some of parts of Hawaii have the highest erosion rates in the nation, and we have to do something about it. Land tenure also relates to this ethic. If you only have a short-term, month-to-month lease on farm land, what is the incentive to *malama* the land? As homesteaders, we can pass down land to our posterity, and we want to leave it in a better condition that how we received it, and this also means having permanent food crops planted for them to harvest from.

Malama Ka 'Aina - FARM BILL 2014

Before I forget, applications are now being accepted for USDA conservation programs. The Environmental Quality Incentives Program (EQIP) provides financial assistance to implement conservation programs, including native plant production and enhancement of native habitats. For more information, contact your local USDA Natural Resource Conservation Service office.



Monsanto Fields in Kualapu'u, Molokai

For information on the USDA NRCS EQIP program, see:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>

For a full listing of all Farm Bill 2014 programs to assist farmers, check their website:

<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farmbill/?cid=stelprdb1244022>

The Impacts of Rain

Probably the only time it rained this much is a long, long time ago when it rained for 40 days and 40 nights. Torrential rains of this magnitude are rare on Molokai, and came at a time just as the USDA was just declaring a drought in Maui County. If you want to break a drought, just call a water or drought meeting. It's happened so many times on



Pala'au, South Central Molokai below Hoolehua & Kualapu'u

Molokai.

The impacts of heavy rain on farming are many, and we won't see some of these impacts until a little later in the season. Too much water favors the growth of fungus and bacteria that can hinder plant growth and even kill them. Fungi are microscopic plants that grow on the plant surface, and will spread their specialized roots into the plant, securing their food from there. They can cause early death of leaves, although some will just live on the surface and not take nutrients from the plant. Plant defoliation can affect plant resilience, and also the quality and quantity of food, fruits or flowers it produces.

Bacteria are both a blessing and a curse, depending on the variety. Bacteria are probably the first plant forms to appear on Earth, and their number exceeds all plants and animals combined. There are two types of bacteria; the good ones called symbiotic, meaning they live with other organisms and support each other in their survival. Pathogenic bacteria, on the other hand, will attack us, our plants, and a lot of different organisms. Bacteria love water, and when conditions are right, they will find their way into plants and move with the water, and it's almost impossible to control them except with resistant varieties of crops or with changing weather that's not conducive to their growth.



Anthrachnose fungus on Avocado Fruit

How do these microorganisms affect plant growth and survival? Both leaves and flowers can be infected by fungi and bacteria. As long as the conditions are right, these plant pathogens will continue to grow and spread. Too much rain, and all flowers may be destroyed, and since many flowers grow into fruits, fruit quality and quantity will be adversely affected. A good example is a watery avocado or papaya, or small fruit set.

Some of these diseases will affect forming fruit. One example is anthracnose fungus on

mango and avocado, which start as black flecks or dashes, which then grow into large irregular spots and will rot the fruit. But the biggest impact will be on its root system, which requires air as much as water to thrive. This damage is more long-term and may even kill plants. This is especially true for drought-tolerant plants or those that require good drainage for optimum growth. Two crops especially affected by water logging include papaya and avocado. Diseases such as *Phytophthora* root rot can devastate these plants, resulting in premature death.

In many of these problems, there's little that can be done to remedy the situation. It's all about prevention, such planting in well-drained soil or in slopy areas that minimize standing water. Fungicides are sometimes used to control fungi, but will be of little utility if it gets washed off every five days. Many fungicides act as a barrier between the leaf or stem and the fungus, and are preventative measures. Others may enter the plant and act as a toxin to the fungus growing in the plant. For long-term crops, it comes with the season, and you may have to wait for a while to see what the long-term impact is on your crops. There are good years and bad years for all, and hopefully all our good soil doesn't get washed away as well.

How Do You Start to Deal with Climate Change?

Is this climate change, or just an isolated incident created by the convergence of normal weather events? If there's a problem, the first step in dealing with the issue is to collect data, make conclusions, and convince others of the problem. A major roadblock is that decision makers are not convinced there's a problem. Although they can listen to experts and scientists on the issue, they've continued to say we don't have a problem even with the evidence presented to them. In climate change as in many other problems we face, it starts with admitting there's a problem, and this is where there's diverging views. The analogy I use is that of an alcoholic who cannot address his addiction until he admits there's a problem.

Climate change means not only an attitudinal change, but also modification of our habits and how we do business. One of the reasons why it's difficult to move this issue forward is that in most situations, the status quo benefits decision makers and those who support them through large donations. Large companies who continue to pollute don't want to hear that they have to stop polluting because there's costs of retooling their business that can cut into their bottom-line. The big corporate lobby is very strong, and if you hurt your political donors by initiating new legislation, then it's not a win-win situation for decision makers and those close to you. These companies will also hire researchers to support their case, and 'muddy up the water', so to speak.

So how do you address the issue and move to middle ground or start to come up with steps to deal with this issue? It's easier to avoid the issue than to deal with it, like burying your head in the beach sand in hopes that the tide doesn't rise high enough to drown you. Recently, Secretary of State John Kerry made a bold statement that climate change is a homeland security issue. Climate change has the ability to disrupt our way of life in ways we don't fully realize. Some islands in the Pacific are already dealing with

this issue and residents have had to abandon their little islands. But as long as it's not happening in the backyard of decisionmakers, then who cares!

Challenges of Agriculture in Hawaii Today

As if we don't have enough problems in agriculture, with too much rain, and constantly dealing with Murphy's law, the biggest issues for those who want to start farming is access to land because you're competing with the 'highest and best use' of a limited resource. 'Highest and best use' usually means housing subdivisions with individual house and lot selling for anywhere from \$400,000 to over a few million dollars, and we're seeing this in the new Ho'opili development and the Koa Ridge development waiting in the wings.

One of the common themes with beginning farmer programs in the state is access to farm land. With the exception of Hoolehua, all others identify access to land as their biggest obstacle. If you're fortunate enough to secure decent farm land with a fair term lease that gives you the ability to grow an array of crops, and have access to water at affordable prices, then you must maneuver through the next gauntlet of challenges related to competitive advantage, production, marketing, and food safety, just to name a few. But getting to Step One is usually the most difficult.



Waikiki, Tourism Mecca of the Pacific

If we use tourism as a model, and create infrastructure similar to what has been done for the tourism industry, such as new airports, scenic vistas, destinations, and the like, then maybe agriculture might have chance to thrive. Creating a safety net for farmers when they fall through the cracks would also help. Looking at the root cause to these problems in Hawaii and of how we can gain traction in agriculture, we need to assess our decision makers,

how they operate, and the political will to make agriculture an important part of our present and future economy.

It's easier to sit back and let things happen, than to make things happen. Another approach is to deal with issues when it becomes a crisis. Even if it's part of our State Constitution to 'protect agricultural lands', it's like many other laws of the land that are not enforced, so politicians are allowed to 'cherry pick' which laws they want to focus on. If anything, dismantling agriculture and making way for more houses is more of a priority than helping agriculture to thrive. If the conditions are right, agriculture CAN and WILL thrive, but how do you start the process?

The rubber hits the road in the deep caverns of the State Capitol, where influence is weighed by who has the strongest lobby and the money to back it up. Money talks, others walk. By far, the housing and land development lobby is the largest contributor to political campaigns, including the Pacific Resource Partnership representing the carpenters and other segments of the construction industry. Closely connected to this lobby are realtors, land developers, engineering companies, and others aligned to the construction industry.

Other influential lobbyists include the medical and insurance industry, utilities, and the seed corn industry. Of these, the strongest potential with the deepest pockets by far, is the seed industry. The four main seed companies, Monsanto, Dow, Syngenta, and DuPont together have revenues exceeding \$121 BILLION and these are not 2013 figures, so give or take another \$20 BILLION.

This is far from an exhaustive list, but you're not going to find the Hawaii agricultural lobby on this list of major contributors, except the seed corn industry. Clearly lacking is any Hawaii-based agriculture industry; if anything, they're the ones who usually beg for money from the legislature! The major economic engines in Hawaii are tourism and the military. I call them the *MONSTERS*, and the whole goal of economic development in Hawaii is to 'FEED THE MONSTERS' in any shape or form. By focusing most of our economic resources on these sectors, and not addressing food production in Hawaii, we create more food insecurity. This lack of diversification creates instability in the economy, and when there are adverse impacts on these two economic sectors, Hawaii trembles, job security is impacted, and the economic instability for many families is the end result. Like many other things in life, there's no sense of urgency until it's too late.

There's a Hawaiian saying, '*Ke aloha o ko kakou 'aina, 'Ola ka mana ku pa'a. Panoanoa ka 'aina, Manoanoa ka po'e.*' *The love of our land, is the power for us to stand fast. Rare is the land, many are the people.* It takes the people to rise up and seek positive changes. If we continue to allow big money to call the shots at the legislature, and we don't call them on that, then we can only blame ourselves.

Hawaiian Grown or Hawaii Flown?

Recently, I had some extra time at the Honolulu International Airport before I boarded a plane for Portland, Oregon, so I dropped in at the Hawaii Shop to check out the many items from Hawaii. There were the normal coffee and macadamia nuts, and also Hawaiian print clothes and jewelry. The first thing I noticed as I walked in was dried pineapple, papaya, and banana with the Dole label on it, synonymous with Hawaii-grown pineapple and the island of Lanai. I checked out these items and to my surprise, found that they were made in Thailand.

As I walked around the store and checked out all the different spices, rubs, jams, and jellies, and macadamia nuts, including Spam-flavored mac nuts, I started to wonder how many of these items even had ingredients that originated from Hawaii. Mac nuts are the best example. Unless it stated on the box 100% Hawaiian macadamia nuts, you could

be sure it wasn't from here. Even if it has Hawaiian in its name, it doesn't mean the raw material came from here. A lot of macadamia nuts come from Australia, the home of macadamia.

Many items will state on the label "Fresh from Hawaii" but what does that really mean? At one time, a nursery on the Big Island imported Leatherleaf fern from Florida, repacked it, and sent it together with anthuriums, orchids, and filler, all over the world with big letters printed on the box, "Fresh from Hawaii". It should have said, "Fresh from Hawaii but originating from somewhere else". Another one that really says nothing is 'Designed in Hawaii'.

So what is produced or originates from Hawaii? I still remember a story my wife told me about her visit to cousins in California. To share a little of Hawaii with them, she took a case of Sweet Bread. When she opened the box, her cousins started laughing. Turns out the Sweet Bread was made right down the road in Gardena, California. So what's made in Hawaii? One brand of Maui Onion Potato Chips is made on the West Coast, Purity Portuguese Sausage and most of the Portuguese Sausages are also made on the mainland.

What does Hawaii really produce? Most of the orchid leis are from Thailand, and many of them come here already sewn. There goes one of our prized cultural treasures, the gather and sewing of lei and sharing of aloha getting outsourced! When it comes producing things, other than meals, we're pathetic. In the peak of King Sugar and Queen Pineapple, there was little foresight to visualize this wasn't going to last forever, so no one planned for tomorrow because he powers that be couldn't, or didn't want to see that far. Many could see this coming, but they couldn't influence the powers that be, so we didn't plan for tomorrow. This is a recurring theme.

So here we are today, trying to get something started in agriculture and it's an uphill battle, to put it lightly. We always expect a sugar daddy or mommy to save us, but these people are only coming here to save themselves! Food is only important when you don't have any, and by then it's too late. As long as you can drive to Foodland or Safeway or Costco or Sam's Place, why worry! As the saying goes, eat, drink, and be merry for tomorrow we die. But what I've come to realize, especially after coming back from Oregon, is that it's the quality of our food that counts, and not quantity.

At the organic seed conference in Oregon, so many people I spoke with recounted how their parents didn't take care of themselves, ate all kinds of junk food and now they're paying for it with all kinds of maladies such as hypertension, diabetes, obesity, sleep apnea, and every problem under the sun. We are what we eat, and the sooner we realize this, the better off we're gonna be. I keep saying this to my self every time I eat Portuguese sausage with eggs and rice for breakfast, all the key ingredients to clog my arteries and spike my blood sugar!

What can we do to bring the phrase 'Hawaiian Grown' back home with good food and create synergy and a home grown movement? There's so many moving parts that it's



hard to get a handle on where to start. I tend to think that it starts with people. It always starts with people, but I prefer to talk to plants because they don't answer back, but they can get just as complicated as people in their needs and requirements for survival.

Mark Twain once said, *"God created man because he was disappointed in the monkey."* That says a lot about us. What this means is that if we keep monkeying around, we're going to end up just like

the monkey, and another animal is gonna take our place. Scary thought! I don't know what that animal might be, but it could be the monk seal, who seems to be moving onto the shore more often. Or even the Axis Deer, who is taking over Hoolehua already and moving to other islands with our help. Nature has a way of taking care of animals when they become complacent. Look at the dinosaur!

I don't want to go the way of the dinosaur, so I'm constantly looking at what tools I need to move forward. The monkey only had a small twig to catch ants for a meal. We have a lot of tools at our disposal. If we use a hammer in the right way, we could build many things, but if we don't know how to use it in the best way possible, we may only be able to scratch our heads with it. We have a great work ahead, and if we don't do anything, then we can tell the next generation that we just didn't try hard enough, and this is why they have nothing to fall back on. And I'm talking about FOOD, real honest to goodness **HAWAIIAN GROWN FOOD!**

A Slave to Technology

Recently, I've seriously thought about throwing my iPhone away because I'm really started to question whether it's moving me forward in life, or whether it's a hindrance to the things I really need to get done. TMI, Too Much Information is a disease that can afflict the best of us, and how much information do we really need to progress, or even survive for that matter. My monthly cell phone and data payments are definitely burning a hole in my pocket, especially when you have five members on a family plan, a wife and an iPad. It can run you broke, especially when some of them have absolutely no self-control with constant streaming, Pandora, and Netflix just racking up the gigs.

I just wonder how people survived before cellphones were invented? Well, just think of all the options they had available. There were hooting, bird calls, drums, smoke signals, conch shells, and even chanting to announce their



arrival, just to name a few, or they just walked up and talked to the person. Probably the main thing that got me a little perturbed is I feel I've become a slave to technology. Computers are bad enough. I check my iPhone as soon as I wake up and even when I go to sleep, but do I really need to be that 'in touch' with the world? Probably not.

My wife reminds me about what's more important than her and the kids, and she's right. She also says I'm not indispensable and when I'm gone, they'll just replace me. I don't think that will happen. In fact, they told me recently that they won't replace me because the state doesn't have enough money, and Molokai is not that important since we represent less than 1% of the state's population, so that's settled. Also, the percentage of the population involved in agriculture has decreased from 2% to 1% so who cares about farmers? They're probably the smallest minority now.

Cellphones are NUTS!

But I really think this connectivity 'thing' is a conspiracy to control our lives and also the world. They can monitor our purchases through the websites we buy at, and also the cards we use, including our shopping points card. It's bad enough that they know what I eat, and what I bought from Friendly Market last week Friday. Big Brother is real, and all this information is used to sell us more stuff that we don't need, and control us under the guise of the 'need to know' due the threat of terrorism and the need to monitor activities of potential terrorists, including us.

I'm not even hooked up to social media! I went in, registered, then thought, "Is this a good idea?" I came to the realization that it wasn't, so I backed out and never went back in. I did this for Facebook and also LinkedIn, and now people are angry with me because I don't want to be their friend. If people really want to talk to me, they can call me or stop me in the street.

As I flew home to Molokai from Honolulu around the Christmas holiday, I saw a Lear Jet parked on the tarmac at the airport and wondered who that might be, since we don't see these symbols of excess on Molokai too often. I decided to ask a security guard who these people might be, and he told me. I didn't even have to send a text, email, or even call someone to get that information. I just walked right up to the guy and asked him, and he told me it was Mark Zuckerberg, the founder of Facebook, and his family. It was that easy, just like they did in the old days. If the guy spoke another language, then that would be another issue!

Before You Press 'SEND'

This new technology can be a blessing or a curse, depending on how you use it. With power comes responsibility. We now have the power to tell people how we feel it when we feel it. You don't have to wait for the 'right time' anymore, but is this best time to send a message? When you say something caustic or untrue about someone, once it's out there, you can't take it back. Once the message leaves you, it can end up anywhere. Take it from me; I've done that!

An old boss of mine once told me, "You become successful when people allow you to become successful." I think this is very true. This comes by building strong relationships, having empathy for other's challenges, and helping those who need help. This ethic seems strong on Molokai, but can easily be lost by the new attitudes floating around the island and through media influences.

Many of us, including myself, will get angry and shoot off an email in retaliation. This may be in the heat of the moment and may not reflect our true self or our intentions. With many things moving at the speed of light, we need to slow down and smell the puakenikeni flowers. One way of dealing with this common problem before barking back is to sit on it, sleep on it, and look at it from different eyes the next day. Do you still feel the same way?

So what does this have to do with farming? In farming communities, the future is in interdependence, in working together, because it's hard enough to survive without friends nearby willing to work together for the common good. We need to create alliances with other farmers to grow together, create markets together, and share ideas. In this kind of cooperative, collegial atmosphere, you can move mountains. It's also about playing offense and defense. Offense is when you're moving forward, and defense is when you're trying to hold your ground, and hopefully you don't lose any in the process.

The goal is to be productive, creative, and hopefully gainfully employed. Being creative means being busily engaged in doing something you will enjoy. You may not enjoy it when you first start out but it grows on you. It could be anything from making jewelry out of shells, planting a garden, or constructing something. You're creating and it doesn't have to be drawing a picture, but the act of creating drives you to create more. You build upon your skills and continue to refine them.

There was a Public Television Special about a sushi master who, at 85 years of age was still trying to perfect his craft each day. He was not satisfied with mediocre. Every step, every move, every ingredient had to be the best. This is the epitome of mastering your craft, which leads to success.

Well, enough pontificating for one newsletter. Stay on the weed, because they're growing right behind you! Spring is right around the corner, so get ready for the best farming season of all.

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