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**Aloha Aina as an expression of
food sovereignty: A Case Study of
the challenges to food
self-reliance on Molokai, Hawaii**

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Aloha Aina as an expression of food sovereignty: A Case Study of the challenges to food self-reliance on Molokai, Hawaii

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Abstract

This paper explores the concept of food sovereignty on the island of Molokai where the Hawaiian value of *aloha aina*, or love for the land, guides local efforts to preserve and promote food self-reliance. In the paper, I discuss the nature and origins of the uniquely Hawaiian food sovereignty efforts on Molokai as well as the challenges they face. In this paper, I present two key arguments. First, I explain how despite a history of distrust of and organizing against the state in the name of *aloha aina*, self-reliance in food on Molokai today requires greater collaboration with, as opposed to isolationism from, the central state. I also show how the conflicting paradigms for “sustainable” agriculture that exist within the Molokai community have precluded the formation of a unified food sovereignty movement. While Via Campesina’s definition of sustainability is relatively specific (1996), in practice, the term “agricultural sustainability,” now ubiquitously used, has come to hold varying meanings for different people. For a community like Molokai, this then complicates what is meant by the rights of peoples to define their own food and agricultural system—the common definition of food sovereignty (Nyeleni 2007). The competing visions of the policies and practices that define a sustainable food and agricultural system on Molokai provide insight for social movements elsewhere that are struggling internally to deconstruct and define what “agricultural sustainability” really means. Drawing on two key examples—marine resource management and controversy over the GMO seed industry presence—the case of Molokai highlights the inherent challenges to realizing food sovereignty in the state of Hawaii and beyond.

Introduction

“Before there was sustainability, there was *aloha aina*,” long-time activist Walter Ritte explained to me, as we sat discussing the current challenges Molokai faces. For Uncle Walter, *aloha aina* holds meaning beyond its literal translation—“love of the land.” To him it also refers to the political movement that developed in the 1970’s in which the term *aloha aina* re-emerged¹ as a catchphrase for a solution to the problems of Hawaiian dispossession of land and resources (Morales, 1984). Within *aloha aina* is the notion that if you take care of the land, the land takes care of you—a relationship severed for Hawaiians by American imperialism. *Aloha aina* came to mean the restoration of that reciprocal relationship between Hawaiians and their

¹ The leaders of Protect Kahoolawa Ohana, a seminal organization advocating for Hawaiian rights in the 1970’s, began using the phrase *aloha aina* in reference to their mission well before realizing its historical significance. Only later did they find out that *aloha aina* was a common term around the time of Queen Liliuokalani’s overthrow in 1983—used as a password by counter-revolutionaries loyal to the Queen and as part of the title of the newspaper, *Ke Aloha Aina* (Morales 1984).

land, both through political means to regain land rights as well as through a resurgence of traditional conservation-oriented land stewardship.

Aloha aina refers to both values and a movement that in many ways are similar to the concept of food sovereignty. As it is commonly defined, food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems” (Neyeleni 2007). Yet “food sovereignty” is not a commonly used term on Molokai, despite a strong community desire to produce its food and become as self-sustaining as possible. On Molokai, the growing discussion around sustainable food systems is filtered through the lens of *aloha aina*—love for the land and an associated sense of responsibility to care for land and resources. From this perspective, agricultural sustainability means the ability to practice *aloha aina*, where by taking care of the land the land will provide, which allows a community, (traditionally organized into a watershed area called an *ahupua’a*), to be self-sufficient. In this way, environmental sustainability, self-sufficiency and food sovereignty are deeply connected within an understanding of *aloha aina*.

Food self-sufficiency is a priority for Molokai residents as well as for the state of Hawaii in general. Again, while “food sovereignty” as an organizing concept is used within primarily Oahu-based politically oriented circles (pers.comm. July 2013), the terms “self-reliance” and “self-sufficiency,” on the other hand, have become incorporated into the lexicon of food systems scholars, practitioners and policy-makers across Hawaii. The statewide emphasis on increasing local food production stems largely from a realization of Hawaii’s vulnerability as a state almost 2,500 miles from the mainland United States with only a seven day food supply at any given time (USDA, 2011). What is colloquially referred to as the “if the barge doesn’t come” mentality is pervasive throughout the islands and across socio-economic strata, especially in a post-9/11 era characterized by an increasing number of natural disasters. On Molokai as well as the other Hawaiian Islands, there has been an upwelling of community interest and engagement in “re-localizing” the Hawaiian food system (Suryanata, 2002; Costa and Besio, 2011). From chefs to environmentalists to social justice activists, local Hawaii-grown food has become a platform that civil society in Hawaii is using to advocate for improved economic, environmental and human health in the state.

Increasingly, the State of Hawaii has made food self-sufficiency a statewide goal². One of the major themes identified in the 2010 Hawaii Comprehensive Economic Development Strategy is

² The Hawaii State Constitution, the Hawaii State Plan, the New Day Plan, Hawaii Green Growth Initiative, Hawaii Comprehensive Economic Development Strategy (CEDS) and other state documents all support increasing Hawaii’s food self-sufficiency.

increased food security and self-sufficiency. In his New Day Plan, Hawaiian Governor Neil Abercrombie has called for an “agricultural renaissance” in which Hawaii grows more of its own food and becomes increasingly self-reliance (Abercrombie 2010). In 2012, the Hawaiian Department of Business Economic Development and Tourism (DBEDT) and the Department of Agriculture put forth a food self-sufficiency strategy report that aims to increase the amount of locally grown food consumed by Hawaii residents. The report’s strategies include strengthening agricultural infrastructure, increasing support for Farmers’ Markets and further developing a “Grow Local/It Matters” campaign (DBEDT 2012).

On Molokai, recently heightened state concerns about food security have galvanized longstanding desires within the community to practice *aloha aina* and restore the relationship between people and land that once allowed them to be self-sufficient and from their perspective, sustainable. This sentiment is particularly strong on Molokai because more so than any of the other Hawaiian Islands, Molokai straddles a monetized cash-based economy and a barter-oriented subsistence economy. Because of the strong reliance on subsistence practices, the Molokai community places great emphasis on Hawaiian concepts of place-based environmental stewardship, and is known for fierce defense of their *aina* (land), *kai* (ocean), and natural resources; their insularism; and their hostility to outsiders. On Molokai, residents take pride in their ability to provide food for themselves and sustain their families and neighbors. As one *kupuna* (elder) explained when I asked about island sustainability, “pretty much everyone on Molokai is sustainable—they are living on the land, they go hunting and fishing” (interview on Molokai, January 2013).

While food self-reliance is an agreed upon goal both on Molokai and in the state of Hawaii, there are major challenges to meeting this goal, many of which have been extensively documented (Page *et al.*, 2007; North Kohala Community Resource Center, 2009; The Kohala Center, 2010; Arita *et al.*, 2012; Melrose and Delparte, 2012). Some of these challenges are Hawaii and Molokai specific, while others reflect the difficulties of broader efforts to challenge the dominant corporate industrial agricultural system, which have been extensively documented as well (Friedman 1993, McMichael 1994). However fewer studies have explored the relationship between traditional values such as *aloha aina*, a concept laden with both spiritual and political meaning, and the move to make Hawaii more food self-sufficient. To build on this small but significant body of literature, (Goodyear-Kaopua, 2009; Lukens, 2013), I use this paper to discuss the nature and origins of what resembles a food sovereignty movement on Molokai as well as the challenges that a food movement rooted in *aloha aina* faces. This is a subject that is relevant not only to those working on food issues in Hawaii but also to agrarian scholars more broadly, given the potentially illuminating yet unexplored linkages between the Hawaiian concept of *aloha aina* and the international movement for food sovereignty. The case

of Molokai is particularly interesting for exploring key questions within agrarian studies today—namely, what does food sovereignty mean in practice? And what kinds of policies support food sovereign communities or nations? Inevitably, strategies and outcomes oriented towards food sovereignty will look different across communities and environments. It is therefore important to examine the diversity of place-based approaches to food sovereignty that vary across social groups. On Molokai, food sovereignty calls for the privileging of place-based knowledge that is inherent in the idea of *aloha aina*. This kind of knowledge is lacking in state-led natural resource management and policy-making in Hawaii today (Poepoe *et al.*, 2007, Vaughan 2012), yet in practice, native Hawaiian traditional knowledge in and of itself does not always provide a clear roadmap towards what is “sustainable” in contemporary Hawaii. Furthermore, place-based management still requires engagement with outside forces ranging from state-level structures to global economic demands.

In this paper I present two examples of how the Molokai community is navigating a place-based Hawaiian approach to food sovereignty—what I am referring to as *aloha aina*—on an island buffeted by outside influences that include threats to marine resources, state-led resource management, and new uncertain agro-technologies such as genetically modified organisms.³ First, I explain how one often overlooked strategy for food sovereignty—the push for community-based natural resource management—has unfolded on the island in a way that marries place-based engagement with the practical realities of political negotiation with larger state-level structures. Despite a history of grassroots distrust of and organizing against the state in the name of *aloha aina*, self-reliance in food on Molokai today requires greater collaboration with, as opposed to isolationism from, the central state. Second, using the example of current debates over genetically modified crops, I show how the conflicting paradigms for “sustainable” agriculture that exist within the Molokai community have precluded the formation of a unified food sovereignty movement. While La Via Campesina laid out an explanation of agricultural sustainability in their original manifesto, in practice, the term “agricultural sustainability,” now ubiquitously used, has come to hold varying meanings for different people. For a heterogeneous community like Molokai, this then complicates what is meant by “the rights of peoples to define their own food and agricultural system,” the common definition of food sovereignty (NGO/CSO Forum for Food Sovereignty, 2002).

Highlighting the competing visions of the policies and practices that define a sustainable food and agricultural system on Molokai provides insight for social movements elsewhere that are

³ The findings in this paper are based on six months of field work in Hawai'i (three months on Hawai'i Island and three months on Molokai), funded by a National Science Foundation Science Education and Engineering for Sustainability postdoctoral fellowship. I conducted approximately twenty semi-structured interviews as well as extensive participant-observation (facilitated by my role as visiting researcher at a local NGO) and document analysis.

also struggling internally to deconstruct and define what “agricultural sustainability” really means. Centered on these two key examples—marine resource management and controversy over the GMO seed industry—the case of Molokai illustrates the inherent challenges to realizing food sovereignty in the state of Hawaii and beyond.

Background

History of Molokai

Molokai, situated squarely in the middle of the chain of Hawaiian Islands, was historically called *aina momona*, the abundant land, or land of plenty. Molokai was known as the land of “fat fish and kukui nut relish,” and produced enough surplus food to feed the neighboring isles. In recent decades, this island has been nicknamed the “Last Hawaiian Island,” because of its 72 percent Hawaiian population, lack of urban development (there are no stoplights or buildings taller than a coconut tree), and its residents’ continued subsistence practices. While Molokai is considered “remote” by many outsiders, the island is certainly not isolated—it situated through complex web of social, political and economic relationships within the broader state, nation and global order. It relies on the state and federal government for key social services,⁴ it is dependent on mainland for critical imports that include food and fuel⁵, and it is of course subject to global-level issues such as climate change, immigration and market fluctuations.

While it has by no means escaped western influences and the forces of globalization, Molokai has better managed its natural resources and maintained a greater sense of its heritage relative to the other Hawaiian Islands (Akutagawa *et al.*, 2012). Historically, the pace of cultural change on Molokai was slower than on the other major Hawaiian Islands, largely because Western trading vessels and whaling ships bypassed it. Molokai was considered a barren land with a sparse population, limited freshwater resources and lacking in adequate protected harbors. As a result, Molokai Hawaiians continued traditional farming and fishing subsistence activities throughout the nineteenth century and well into the twentieth (McGregor, 2007). In the nineteenth century, the major impact of Western contact on Molokai was the decline of the population due to diseases and emigration. This decline continued through the first quarter of the twentieth century until the Hawaiian Homes Program and the pineapple industry attracted people to Molokai starting in 1922. Up until this point, cattle ranching had been the major industry on Molokai. Many of the men who did not emigrate away from Molokai found employment at the Molokai Ranch (McGregor, 2007).

⁴ For example, it is estimated that nearly \$500,000 are channeled into Molokai every month as welfare payments (Busch et al. 2012).

⁵ All petroleum and natural gas used on Molokai are imported, which is significant especially because Hawaii is dependent on oil for electricity generation (Busch et al. 2012)

These new economic enterprises brought significant change to the central and western parts of the island that had previously been sparsely populated and devoted to ranching. The Hawaiian Homes Program brought together Hawaiians from all of the other major islands to start a new agricultural community intended to revitalize the Hawaiian people. The homesteaders who obtained land on Molokai came from Honolulu, rural O'ahu, Maui, Hawai'i, Kaua'i and from within Molokai itself. They were given second-class lands that while fertile, faced major drawbacks including lack of sufficient water, strong winds, pests and diseases (Keesing, 1936). 131 families settled in Ho'olehua in the 1920's and began planting large quantities of vegetables for commercial markets and home consumption (Keesing, 1936). The difficult farming conditions required substantial financial outlay and constant care, and at times the returns on produce sales were barely enough to cover the costs of production (McGregor, 2007). In 1926, homesteaders turned to the pineapple companies for greater security and entered into contracts with Libby, McNeill and Libby to plant pineapples on their land. Initially, homesteaders planted pineapples in conjunction with other crops, but eventually the growing of pineapples under a plantation system replaced diversified agricultural enterprise on individual plots. Rather than seeking outside employment as a source of income to supplement their struggling farms, homesteaders could now keep their land in active and profitable agricultural production. As the plantations grew, most homesteaders hired Korean and Filipino workers to care for their portion of the pineapple crop, which brought new waves of immigrants to the island. The growth of the pineapple industry on homestead land meant that homesteaders quickly became integrated into and dependent upon a cash economy based on wage earning and marketing of cash crops (McGregor, 2007).

At the same time, Hawaiian homesteaders and the broader Molokai population still relied heavily on Molokai's reefs, streams and forests to survive, and continue to do so today. Studies of the economy of Molokai from 1970 to 1994 documented the continuing importance of subsistence fishing, hunting, gathering and farming as part of the livelihoods and culture of the Molokai people (McGregor, 2007). When the pineapple industry phased out on Molokai in the late 1980's as it became cheaper to produce pineapples elsewhere, subsistence provided families with essential resources that compensated for a lack of jobs and ready cash for groceries. When the pineapple agri-business closed on Molokai, subsistence became a more vital aspect of the economy (McGregor, 2007). In 1994, the Molokai Subsistence Task Force found that 38 percent of Native Hawaiian families' food was derived from subsistence activities (this figure was 29 percent for Molokai families overall). Families reported receiving food through subsistence activities at least once a week and almost every person surveyed believed subsistence was important to the lifestyle of Molokai (McGregor, 2007). A more recent study in 2012 found that 40% of Molokai families' food came from subsistence activities (Akutagawa et

al. 2012). This study also found that 72% of those surveyed said subsistence was very important to them. Residents say that reliance on subsistence has increased since the closure of the Molokai Ranch in 2008, which raised an already high rate of unemployment to 17.5% (as of 2012) on the island (Busch et al. 2012; Stephenson, 2013, unpublished search). Subsistence activities are particularly valuable on Molokai where food and energy prices are the highest in the state and astronomically high relative to mainland prices, in part due to shipping costs (Busch et al. 2012).

Subsistence living on Molokai does not play merely a utilitarian role. Subsistence was and is considered a tradition that creates a strong sense of a unified community and that bound the social elements necessary for cultural perpetuation together (McGregor, 2007). A 1981 study on the values of Molokai found that “the preferred way of life” was closely associated with rural living, Hawaiian culture, slow pace, everybody knowing each other, family togetherness and living off the land (Canan, 1981).

In the past thirty years, the values of the Molokai community have remained virtually the same. The vision statement included in a rural empowerment grant in 1999 designed by a broad cross section of the island envisions Molokai as a community that “takes pride in its resourcefulness, self-sufficiency and resiliency.” It goes on to state that “the values of *aloha aina* and *malama aina* (love and care for the land) guide our stewardship of Molokai’s natural resources, which nourish our families both physically and spiritually.” (Molokai Enterprise Committee 1998) More recently, Molokai residents reaffirmed these values in an updated vision statement that envisions a Molokai that leaves for its children a visible legacy: “an island *momona* (abundant) with natural and cultural resources, people who *kokua* (help) and look after one another” (Molokai Community, 2008).

Aloha aina: Traditional Hawaiian values

Integral to Hawaiian management is the concept of *aloha aina*, or love and respect for the land. Prior to first contact, Hawaiians maintained a spiritual belief and practice premised upon land being considered a living entity (Conway-Jones, 2005). According to the *kupuna* (elders), Hawaiians are genealogical descendants of the earth, sea, sky and natural life forces. Like an elder sibling, land was believed to care for the Hawaiian people as long as the Hawaiian people cared for it, in a reciprocal interdependent relationship. One literal translation of *aina* is “that which feeds.” This definition connotes a concept of the environment based on the interconnections of land and people, and a union between culture and ecosystem (Beamer, 2013). Traditional notions of Native Hawaiian resource management are premised on the understanding that all natural and cultural resources are interrelated. Hawaiians also recognize that there is interconnectivity within ecosystems—what is done in one part of the landscape

affects the rest of the landscape (Kumupono, 2010). Hawaiian practices were oriented around a wedge-shaped unit of land called an *ahupua'a*, which represented a complete ecological and economic production system, running from the mountains to the sea.

Aloha aina is the Hawaiian value at the core of traditional spiritual belief and custom. Land is viewed not as a commodity but as the foundation of the cultural and spiritual identity of Hawaiians. Those with *aloha aina* have a deep appreciation of nature's abundant offerings and a spiritual rootedness to the land (McGregor *et al.*, 2003). A sense of place and understanding of one's particular environment leads to the formation an individual's psyche as well as of a community's local character. Shared ancestry with the natural environment gives Native Hawaiians a responsibility to protect the land and its resources for current and future generations. Molokai scholar Davianna McGregor writes that *aloha aina* embodies several layers of responsibility. Along with protecting the physical sustainability of the Hawaiian Islands, it has come to also mean organizing and rallying for Hawaiian native rights and sovereignty to achieve the political standing necessary to protect the *aina*. Indeed, the movement that developed in the late 1970's to protect the island of Kaho'olawe from military bombing practice there led to a revival of the traditional Hawaiian value of *aloha aina*. Kaho'olawe then sparked a broader cultural revival that embraced the environmental, political, and spiritual meaning and directive of *aloha aina* (McGregor 2002). At an even deeper level, it means a spiritual dedication to honor and worship the gods who were the spiritual life of these forces of nature (McGregor, 2002). Aloha aina thus links social, cultural and ecological justice (Beamer, 2013).

Hawaiians view *aloha aina* as active and something that must be put into practice rather than a state of being (Beamer, 2013). Conservation in particular is an integral aspect to traditional subsistence activities that connect people to land and sea. Traditional subsistence practitioners are governed by particular codes of conduct that are intended to ensure the availability of natural resources. Rules that guide behavior are tied to spiritual beliefs concerning respect for the *aina* (sacred land), the virtues of sharing and not taking too much, and a holistic perspective of organisms and ecosystems that emphasizes balance and coexistence (Matsuoka *et al.*, 1998). For native Hawaiians, the health of people and their social systems is deeply tied to the health of the *aina* (McGregor *et al.*, 2003).

Molokai residents have a deep-rooted sense of aloha aina, which they have articulated in scores of community documents and even more visibly through a long history of island-based activism against development, particularly tourism. Since the closure of the pineapple industry, the issue of economic development on Molokai has stirred controversy over land use and practices, however. Private business interests and certain segments of the government have pushed for tourism development on Molokai (Cooper and Daws, 1990). Through community-

based efforts and grassroots activism, residents have organized on numerous occasions to stave off tourism development that they believe would threaten the natural resource base (McGregor, 2007). Most recently, community activism halted plans by the Molokai Ranch to develop 200 luxury lots on the southwest corner of Molokai, a fragile ecosystem known as Lau'au Point. In 2008, the Ranch closed ranch facilities, its golf course and hotels, which have since sat idle. Currently, grassroots efforts are developing that oppose the growing presence of the seed corn industry on Molokai—namely Monsanto and Mycogen, as discussed below. Alongside these “defensive” tactics (Walter Ritte, January 2013), Molokai residents have focused on keeping traditional subsistence gathering practices intact. While not perfect, an “ebb and flow” process of replenishing stock exists on Molokai in which community members communicate about the availability of resources in certain areas, moving elsewhere to gather if a particular spot has recently been harvested. While not everyone follows this protocol, the process still encourages community interaction and allows to a certain degree for resources to replenish in the area (Tamashiro, 2011). Last sentence?

Marine resource management and subsistence practices on Molokai

Molokai residents generally consider their lifestyles to be relatively sustainable because of their ability to procure food for themselves. As one female resident put it, “on other islands a kid’s success is defined by As in school, but here they talk about it in terms of, can you put food on the table” (interview with Molokai resident, January 2013) This sentiment is heightened in a geographically isolated state where residents are particularly aware of their vulnerability to disruptions to food supply lines. Yet a number of Molokai residents recognize that living off the land does not necessarily promote human or environment health and longevity—in other word, self-sufficiency does not equal sustainability. As a local filmmaker articulated, “Living off the land doesn’t necessarily mean increasing the health and abundance of the land. It sounds healthy, but...if fresh fish is deep-fried and served with white rice, it’s no longer healthy” (interview with Molokai resident, January 2013). He added that subsistence practices are no longer necessarily tied to the level of awareness and knowledge of natural resource management that used to exist, and that the loss of these standards “works against island sustainability.” Another young community organizer also stated that while people talk about “sustainability” they do not necessarily put it into practice, as evidenced by the commercial sale and associated overharvesting of natural resources he has observed (January 2013).

Mo’omome fishery

The case of the Mo’omone fishery on northwest Molokai illustrates the tenuous relationship between subsistence fishing, a form of food self-reliance for islanders, and resource sustainability. Customary fishing practices are threatened by pressures from both residents and non-residents—a situation Hawaiian practitioner Mac PoePoe calls “trouble in paradise” (June 2013). Since the 1920’s, the Ho’olehua Hawaiian Homestead community on Molokai has relied heavily for subsistence on the inshore marine resources of the Mo’omome fishery, which encompasses a 12-mile stretch of coastline along Molokai’s northwest shores. It is estimated that the annual harvest by the subsistence fishery is 75,000 to 100,000 lbs, which is high yet to date “sustainable” in the sense that the fishery has persisted and still considered sufficient to support harvesting (Hui Malama O Mo’omomi, 2013). This fishery has been relatively protected from overfishing due to the isolation of the coastal area around Mo’omomi Bay and behavioral norms within the Ho’olehua community that continue to be defined by traditional Hawaiian values and orientations (Poepoe *et al.*, 2007). However, Hui Malama O Mo’omome, whose mission is to restore and maintain the health of the Mo’omomi coastline for all who live on Molokai, was formed in 1993 in response to growing concern around Mo’omome that mounting pressures from both inside and outside the community were leading to overharvesting. Residents had voiced concern about increasing competition from off-island fisherman and new residents from North America and the Philippines who were seen to not share Hawaiian subsistence values and practices. Community members feared the depletion of the natural resources upon which they relied for subsistence. They identified an emerging mentality that “if you don’t take something when you see it, someone else will” (Matsuoka *et al.*, 1998). Commercial harvesters today still cause fishing pressure and continue to introduce standards of behavior and perceptions that deviate from traditional subsistence practices and conservation ethics. Some use improper harvesting methods, take undersized animals or ignore seasonal prohibitions. There has been a decline in the size and populations of lobsters at Mo’omomi since the late nineties, and a near collapse of the population in 2010 and 2011. This overharvest has largely been caused by community members (Hui Malama O Mo’omome, 2013). The self-sufficiency of the Ho’olehua community is thus threatened by commercial fishing practices that could deplete the inshore fishery resources and reduce the supply of food produced by subsistence fishing in the area. Already, statewide declines in reef fish abundance have been attributed to fishing pressure/overfishing (Grigg, 1994), which supports the impressions of Molokai fishers who consider overfishing to be a major cause of declines in resource abundance (Hui Malama O Mo’omome 2013).

“You can’t pay your electricity bill with aloha”⁶

⁶ Quote from Molokai resident, June 2013.

Pressures on Hawaiian fisheries come from commercialism, and the inescapable fact that Molokai, despite its relative remoteness, is situated within the broader national and global capitalist economy and environments. For example, high prices for *'opihi* (limpets) in markets and catering businesses on Oahu, where limpet have been wiped out, have led to increased harvesting on Molokai for commercial sale (Matsuoka et al. 1998). In general, Molokai residents believe that subsistence and commercial harvesters from places like Oahu and Maui have sought to exploit the more abundant resources of Molokai (Matsuoka *et al.* 1998). The current Mo'omomi proposal notes that despite best intentions, even groups with a strong tradition of marine fisheries conservation can be driven to non-sustainable behavior by external economic and social forces. In my interviews, Molokai residents re-iterated that even if they relied heavily on subsistence practices, they still needed a source of cash in order to survive on modern day Molokai. With a lack of employment, residents turn to commercial sale of marine resources to obtain cash to pay electricity bills and mortgages, buy medicine and meet other cash-based demands. As one middle-aged man told me, "you can't pay your bills with a cooler of fish," a sentiment expressed by a number of residents. This same man, who now is part of a community-based land management committee, admitted to selling fish to local restaurants when he was unemployed as a way to earn cash. He explained that he changed his ways once he realized the long-term damage overfishing was causing. As he articulated, "overfishing has increased, because life is getting harder and harder. People get behind in finances and then go get more fish [to sell]. I can say this because I was doing it at one time to take care of my family when times were tough. But now I know better, because if we overfish, what will we eat in the future? Canned food from California?" (June 2013). Several other residents also expressed that the need for cash to survive in today's economy, even on Molokai, drove poorer community members to overharvest for commercial purposes.

Responding to these pressures, Hui Malama O Mo'omomi has had noteworthy success in educating youth and encouraging sustainable fishing practices around Mo'omomi. The group's leader, Mac Poepoe, has spent the past twenty years working to promote responsible fishing based on individual conscience, social and family pressure, and the training of youth to become "good marine citizens" (Poepoe *et al.*, 2007). The organization hosts hands-on education programs and cares for the coastline area in conjunction with neighboring land managers (i.e. Molokai Land Trust and The Nature Conservancy). Poepoe himself has collected extensive observational data that has been organized into the Pono Fishing calendar, a localized guide to sustainable fishing based on the lifecycles of fish. While some have criticized his "social pressure" techniques (which have bordered on neighborly threats), today around Mo'omomi there is now a stronger conservation ethic, greater community support and management knowledge, and a system of monitoring (Poepoe *et al.*, 2007). The community-managed system at Mo'omomi is viewed by lawmakers, scientists and other Hawaiian communities as a

successful example of traditional management practices, and is the hallmark of pilot programs in other Hawaiian communities (Molokai Dispatch, 2013).

Proposal for Community-based subsistence fishing area

The Ho'olehua community prides itself on its "self-reliance" in its fishery conservation efforts (Poepoe et al., 2007), yet one inescapable challenge is that they have no formal fishery management policies or institutions that are legally enforceable to insiders or outsiders. While in 1994 Hawaii State Legislature created a process for designating community-based subsistence fishing areas (Act 271/94), the Mo'omomi area to date has remained a demonstration pilot project. It has functioned unofficially as a CBSFA, meaning that currently fisherman have no legal obligation to follow suggested practices. Hui Malama O Mo'omomi is currently pushing forward a proposal that would make the traditional practices they encourage legally enforceable in the designated area of Molokai's north shore. This process would formalize a social code of conduct that has been in place for generations in the area, and more recently renewed by the efforts of Hui Malama O Mo'omomi. Commercial harvesting of reef species has long been discouraged in the management area both by the Ho'olehua fishing community and by the policies of neighboring landowners. Formalization would make traditional fishing practices law and likely encourage the recognition and compliance of this code by visitors and non-residents (cite CBSFA).

This kind of legal recognition by the state, and the Department of Land and Natural Resources (DLNR) more specifically, is essential for the Ho'olehua community to maintain a degree of food sovereignty, because while local island-based stewardship has improved (Sumners, 2013) threats from outside the island persist. Although Molokai's population has remained static over time, increased human populations and overfishing on neighbor islands have led to resource depletion on those islands. Most recently, the problem of resource depletion by outsiders has become a priority because of the plethora of escort boats accompanying canoe races from Oahu to Molokai throughout the year. Many of these escort boats "raid" Molokai's coastline as they come with extensive boats, high tech gear and long nets to take fish, lobsters, squid, crabs and other marine resources back to Oahu (Ritte, 2011).

Along with Hui Malama O Mo'omome's efforts to create a legally enforceable CBSFA to combat this issue, Molokai *kupuna* (elders) have also organized to protect Molokai's marine resources from outsiders. The *Aha Kiole* (people's council) is a traditional resource management group comprised of eight Hawaiian practitioners from each island. Molokai currently has the most developed *Aha Kiole* of the islands; however, they only serve an advisory role to DLNR. This status again makes it difficult to enforce any community-based fishing regulations designed to prevent overfishing by outsiders.

As this example shows, *aloha aina* on Molokai today is not as simple as “if you take care of the land, the land takes care of you.” Because of Molokai’s close proximity to neighboring islanders and its accessible abundant waters, engagement with the state is necessary if Molokai is to sustain its resources. Molokai’s embeddedness in a larger cash-based economy also demands that residents work together to find ways to meet cash-based needs (e.g. payment of bills) without compromising the resource base that is also critical to the local economy. The temptation of commercial markets for prized marine resources makes *aloha aina* that much more difficult to implement on an island where people pride themselves on subsistence living, but cannot entirely escape the trappings of a modernized capital-based society. For self-reliance on Molokai to be sustainable—in other words for it to be carried into the future—collaboration, not isolation or complete independence, is required. This collaboration must be within communities as well as between communities and the state, in order to address internal and external threats to the resource base, respectively

A’ole GMO!⁷

For Molokai residents, sustainability, perceived as self-reliance, entails not only conservation of the natural resources that they hunt and gather, but also the ability to grow food to feed the island’s community. In a recent study of agriculture on Molokai, 90 percent of those surveyed said they preferred to buy local Molokai food products and 98 percent said they would eat more local food if it were available in stores and markets (Akutagawa et al. 2012). One community leader explained that “it makes sense to keep this land open to produce food—we want to keep open space and keep the island sustainable by feeding ourselves. Recently we have gotten the word “sustainable” but that’s just how we live—our parents taught us to live off the land” (January 2013).

Yet while there is consensus around food self-sufficiency as a priority, there is disagreement on Molokai, reflective of larger debates in the state, over the types of agricultural practices and policies that would enable the island to become sustainable and self-reliant. Visions of a sustainable self-reliant agricultural system on Molokai range from large-scale conventional farming that feeds the local population while profiting through off-island export to smaller-scale organic farming of “canoe crops” that serve the needs of the Molokai community—and everything in between. The current controversy over genetically modified organisms (GMOs) on Molokai in particular illustrates instead how slippery the notion of “food sovereignty” can

⁷ “A’ole GMO,” meaning “No, GMO” has been the rallying cry at many of the recent GMO marches in Hawaii, including the Molokai march in March 2013.

become—and how challenging it can be to implement—when there are competing visions within a given community for how best to achieve food self-reliance.

In recent years, concerns have heightened that the growing presence of the biotechnology seed industry on Molokai threatens efforts to increase Molokai's food self-sufficiency. A recent agricultural needs assessment on Molokai concluded, for example, that while biotech seed crops have proven economically lucrative for Hawaii agriculture, "allocating precious acreage and limited water resources to GMO seed crop research would in the long-term compromise the State's overall food security and limit the State's ability to provide locally-grown healthy and nutritious foods" (Akutagawa et al. 2012).

While the popular image of agriculture in Hawaii is still that of sugar cane and pineapples, today industrialized corporate agriculture in Hawaii has shifted to biotech crops—namely genetically modified seed corn research. This transition took place as tropical plantation agriculture lost its economic edge and ability to compete on the global market. Today the most profitable Hawai'i seed crop, corn, accounts for 95% of the total value of Hawai'i's seed industry, which in turn comprises 36% of Hawai'i's \$627 million agricultural sector. This transition has happened quickly, though largely unbeknownst to many residents and visitors until recently (Voosen 2011).

The seed business is now one of the fastest growing agricultural industries in Hawaii (Wu 2007). On Molokai, seed research has in fact been a part of the island's agricultural economy since 1965. However previous research involved hybrid seed rather than genetically modified organisms and occupied a much smaller area of land than is currently devoted to corn seed research. Today, there are two main companies—Monsanto and Dow Agro-Science—that are growing GMO corn seed on approximately 1,850⁸ and 385 acres, respectively. These two companies are the largest private employers on the island, and employ roughly 210 people on the island.

Moms on a Mission

A segment of the island population vocally opposes the growing presence of the seed corn industries on Molokai. The growing anti-GMO movement on Molokai has expressed concern over the pesticide use and alleged lack of soil conservation practices of the companies, as well as the fact that they are using land and resources that could otherwise be used for the production of food. Some Molokai residents see the seed corn industry as the latest iteration of a plantation style economy that has characterized Hawaiian agriculture for the past two

⁸ Of these 1,850 acres, 1,650 acres fall under a 99 year lease from Molokai Ranch entered into in 2007 (Lichtenstein 2009).

centuries. Like sugar and pineapples, corn seed is grown and shipped to the mainland (to research centers in the case of corn seed) rather than for local consumption. However as one resident noted, unlike sugar and pineapples, GMO seed corn is not even edible in a crisis (e.g. natural disaster) situation. Residents worry that chemical companies “are becoming the main farmers on [the] island,” as was voiced by the coordinator of Hui Ho’opakele Aina, a group opposed to GMOs (Walter Ritte, quoted in Star Bulletin March 24 2007).

In the last year, a more organized movement against the presence of the seed companies on Monsanto has developed. Moms on a Mission (MOM) was formed in 2012 by Molokai resident and mother Mercy Ritte, after her son became ill from what she believes to be pesticide drift from the nearby Monsanto fields. This group has gained traction and has been featured prominently on a number of anti-GMO campaigns across the state. Their organizing culminated in a march against Monsanto in March 2013 that attracted state and national media attention. Another grassroots organization, Sustainable Molokai, has chosen to avoid engaging in GMO-related activism and instead is pursuing a strategy of supporting local farmers to make diversified agriculture a viable livelihood. By increasing the economic viability of small-scale agricultural production on the island, the organization hopes to bypass the current scenario in which the seed corn industry, the largest private employer on the island, is seen by some as a “necessary evil” for the island economy.

While the anti-GMO movement on Molokai is gaining force, it is comprised of individuals who oppose the industry on various grounds and who envision different solutions. Concerns over the risks associated with the actual technology of genetically modified organisms has garnered attention worldwide, but for many Molokai residents involved in anti-GMO organizing, the seed company’s use of pesticides is of greater immediate concern. From interviews with active anti-GMO advocates on the island, it is clear that one of the main concerns of Molokai residents is the potential risks to human and environmental health associated with pesticides applied by the seed corn companies. They describe run-off and dust storms associated with soil erosion (a result of what they say is poor soil conservation on the part of GMO companies) and worry about the potential hazardous chemicals that may be transmitted through the air and water sources. Several interviewees who hunt deer, a common subsistence activity on Molokai, also questioned the risk of eating deer that may have broken into GMO fields and grazed on sprayed crops. One activist cited greater resentment towards Monsanto than Mycogen, because Monsanto’s fields are in close proximity to residential housing and schools, while Mycogen’s fields are downwind from most settlements and pose less of a health risk. At the same time, other members of the MOM group worry about the type of genetically modified seeds the companies are growing and the possibility of genetic drift. The organizer of MOM explained that she saw health risks associated with the GMO industry stemming not only from their

pesticide use at a local level, but from the unhealthy processed foods containing GMO ingredients sold worldwide. For her, the goal of her organizing was not just to move seed fields farther away from town or improve pesticide management, as some have suggested, but to evict the companies entirely from the island and replace them with a “better” alternative. To this end, she is working to promote local farmers by creating a distribution center on island where local produce can be consolidated for purchase.

Molokai residents have voiced dismay at the growth of an agricultural industry that will not actually directly feed local residents. Yet larger discourses linking anti-GMO activism to explicit goals for food sovereignty are not as visible on Molokai as they are closer to the state capital (i.e. Honolulu food justice circles) and in national and global social media networks. For example, at the first of the series of anti-GMO marches, protestors on the north shore of Oahu held signs saying “*Aloha aina*: De-occupy Hawaii.” Reflecting the historical use of the phrase *aloha aina* in past efforts to restore the independent Hawaiian nation, the phrase has more recently been deployed at anti-GMO protests when people speak of Hawaiian sovereignty and independence from corporate interests. As journalist Imami Altemus-Williams has noted (2013), “when protesters chant “*aloha ‘āina*” at anti-GMO marches, they are alluding to the fact that this fight isn’t only over competing visions of land use and food creation. It’s also a battle for the islands’ political sovereignty.”

On Molokai, claims for food sovereignty are more implicit. Molokai residents do not explicitly use the rhetoric of “food sovereignty,” but they certainly do connect concerns over the GMO corn seed industry on their island to notions of *aloha ‘āina*, whose meaning is laden with political implications. While the original meaning of *aloha aina* lies closer to “love for the land” than “patriotism” (Silva, 2004), the term today hearkens back to traditional Hawaiian value and spiritual belief as well as a history of anti-imperialism at the turn of the 19th century and the more recent Hawaiian political activism that resurged in the 1970’s. On Molokai today, anti-GMO residents do not see the use of agricultural chemicals as “sustainable” or as part of the practice of *aloha aina*. As one activist explained, “George Helm [father of the Aloha Aina movement in the 1970’s] would not see this [pointing to Monsanto fields] as *aloha aina*” (June 2013). They also worry that the expansion of the seed companies—namely their increased use of land and water—will compromise the ability of the island to move towards feeding itself, and achieving greater food self-reliance. Molokai is currently designed to be in “severe drought” and as water usage increases (primarily due to the seed companies), the State has placed a mandatory reduction of irrigation water by twenty percent and increased water rates for all agricultural users other than Hawaiian Homesteaders⁹. In this way, an understanding of *aloha*

⁹ Under the Hawaiian Homes Commission Act, Molokai Homesteaders are entitled to two-thirds of the water from the Molokai Irrigation System for their agricultural lands without charge.

aina predicated upon a reciprocal relationship with the land that allows for localized food self-reliance is seen to be threatened by the growing seed corn industry.

Competing paradigms for food self-reliance on Molokai

The seed industry, and skeptics of the anti-GMO movement more broadly, have countered that for Hawaii to become more food self-sufficient, large-scale operations that capitalize upon GMO technology are necessary. They point out that small-scale farming for local consumption in Hawaii is not viable in today's globalized world, where imports from industrial-scale corporate agricultural production are cheaper than locally produced food. Small farmers in Hawaii themselves recognize that moving from home gardening to farming as a livelihood is very difficult given the high cost of production in Hawaii. The high price of energy, land, wages and inputs (most of which are imported from the mainland) mean that it is nearly impossible to compete with imported cheap food. Farmers must rely on an almost niche market for those who are willing and able to pay a premium to support local agriculture. Molokai farmers face the added burden of a very limited market on-island, and high shipping costs with limited options to ship to any other of the islands. Monsanto and Mycogen representatives on Molokai point out that their companies subsidize the agricultural infrastructure on Molokai—namely the irrigation system and the Hikiola cooperative through which farmers purchase their inputs. They argue that they provide agricultural jobs, keep land in agricultural production that could otherwise be lost to urban or industrial development, and support the local agricultural community by lending equipment and purchasing some supplies locally. A Monsanto representative who had previously worked in the pineapple plantations on Molokai also explained that the seed companies were creating technologies to *reduce* the use of pesticide spray, through the engineering of crops with pest resistance. Several farmers outside of the seed industry also argued that in a tropical climate rife with disease and pests, genetically modified organisms can play a vital role in the viability of various agricultural industries.¹⁰ Even within the broader Molokai community, there is a sentiment that along with providing jobs, the seed corn industry helps preserve Molokai's rural agrarian nature and that it is a better alternative to other forms of proposed development and job creation (e.g. tourism). As one homesteader explained, Monsanto "has kept people working and kept the lands open and in agriculture...it has helped prevent overdevelopment with lots of people coming in from happening." The leader of Moms on a Mission herself noted that while the number of people opposing the seed corn industry on Molokai is growing, the silent majority see the companies as providing jobs without changing the agrarian lifestyle on Molokai—a priority characterized by the ubiquity of "keep country country" and "keep Molokai Molokai" bumper stickers on the

¹⁰ For example, pro-GMO advocates cite the development of the genetically modified "Rainbow" papaya as a transgenic success story that brought Hawaii's papaya industry, threatened by the ringspot virus, back from the brink of collapse.

island. Another resident noted that the jobs provided by the seed companies help keep the marine resources of Molokai “sustainable.” As she explained, in times of unemployment people fall back on subsistence harvesting as a safety net, which can put a strain on the natural resource base. Employment creation through the seed companies thus reduces that strain and promotes a more sustainable food system.

This kind of tension over the kinds of agricultural practices that will result in a strengthened local food system precludes any kind of unified food sovereignty movement from developing on the island, or in the state more broadly. It also calls into question how the rights of community members to define their own food and agricultural systems are negotiated, when definitions of a “sustainable” agricultural system within a community conflict.

Conclusion

On Molokai, residents want to sustain the land that provides for them, and that allows them to be relatively self-sufficient. This is the Native Hawaiian concept of *aloha aina*, in which wellbeing is synonymous with people-environment kinship and an organic relationship that bonds humans to the land. Hawaiians care for the land so that the land will provide for current and future generations—a philosophy that today many Hawaiians recognize to be aligned with popular notions of “sustainability.” Today, Molokai residents continue to place priority on taking care of resources so that they can be as self-reliant as possible. This is viewed as particularly important for creating a resilient self-sustaining island community that is resilient to shocks such as disruptions to food and oil supply lines and natural disasters. This priority also has political undertones—*aloha aina* as a political movement dates back to resistance to American imperialism in the nineteenth century and resurged more recently in 1970’s around protesting the bombing of the sacred land of Kaho’olawe. Food self-reliance requires access to land and resources, both of which native Hawaiians have historically been dispossessed from since colonial contact. Approaches to food sovereignty on Molokai involve both explicit negotiations with the state for rights—in the case of marine resource management the right to keep non-residents out of their waters for example—as well as more implicit political claims, such as those embedded in the discourse over GMOs. The traditional value of *aloha aina* is critical as an organizing concept for bringing Hawaiians together as they advocate for food self-reliance. Yet it is a place based approach, rooted in an understanding of social organization according to *ahupua’a* boundaries, which must now grapple with a highly mobile population living on a globally connected island. This makes marine resource management that much more difficult, and requires engagement with entities such as the Department of Land and Natural Resources that cross traditional *ahupu’a* boundaries. Likewise, *aloha aina* does not provide a

clear road map regarding the role of new agro-technologies such as GMOs. In the case of the seed industry, Molokai residents have clearly expressed their desire to define agricultural policies and practices on their own terms—however as a community they lack consensus as to what those policies and practices should be. This serves as a reminder that the current definition of food sovereignty leaves a great deal of room for interpretation. Before communities or nations can begin to push for food sovereignty, they must begin the hard work of reconciling competing visions for how they want to produce their own food and negotiating the murky terrain of what is or is not “sustainable.”

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