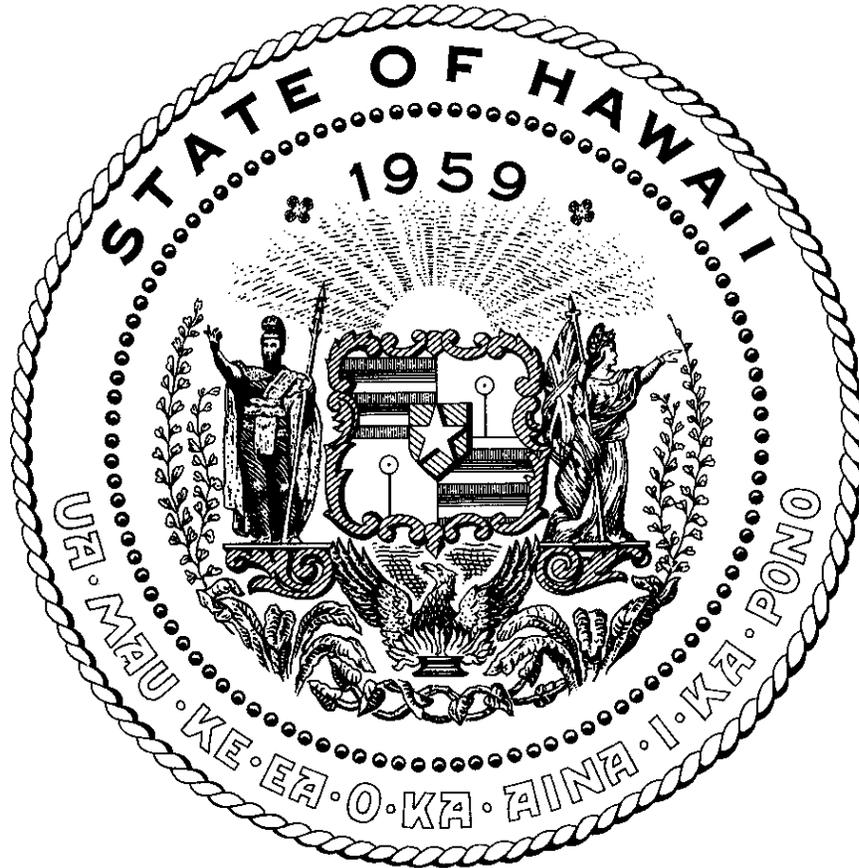


**INCREASED FOOD SECURITY AND FOOD SELF-SUFFICIENCY STRATEGY**  
**VOLUME II: A HISTORY OF AGRICULTURE IN HAWAII AND TECHNICAL**  
**REFERENCE DOCUMENT**



Prepared by  
**OFFICE OF PLANNING**  
**DEPARTMENT OF BUSINESS ECONOMIC DEVELOPMENT & TOURISM**

**IN COOPERATION WITH THE**  
**DEPARTMENT OF AGRICULTURE**

*This Report Was Prepared under an Award from the*  
*U.S. Department of Commerce*  
*Economic Development Administration*  
*Award Number 07 69 06658*

**OCTOBER 2012**





# **INCREASED FOOD SECURITY AND FOOD SELF-SUFFICIENCY STRATEGY**

**A STATE STRATEGIC/FUNCTIONAL PLAN PREPARED  
IN ACCORDANCE WITH HRS CHAPTER 226  
HAWAII STATE PLAN  
and the  
HAWAII COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY**

## **VOLUME II: A HISTORY OF AGRICULTURE IN HAWAII AND TECHNICAL REFERENCE DOCUMENT**



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*The Office of Planning gathers, analyzes and provides information to assist in the overall analysis and formulation of state policies and strategies.*

*The Office of Planning is responsible for the State's planning, land use and coastal zone management programs and for administering a statewide planning and geographic information system.*

*This report was prepared by the Office of Planning, Department of Business, Economic Development & Tourism. The statements, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the Economic Development Administration.*

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- Strategies for economic recovery from natural disasters,*
- Economic development strategies for Native Hawaiian communities, and*
- Implementation of the Hawaii Comprehensive Economic Development Strategy (CEDS).*

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## Abstract

Increasing food self-sufficiency and food security in the State of Hawaii provides better accessibility to fresh and healthy food. This report is part two of a three volume report entitled, “Increased Food Security and Food Self-Sufficiency Strategy.” Volume II examines the history of agriculture in Hawaii from the 1960s to the present time, focusing on the transition from the plantation systems to diversified agriculture.

Volume II also provides technical information and data on contemporary issues affecting Hawaii’s agricultural industry. A literature review, interviews, and meetings with key industry stakeholders were held to identify issues that affect Hawaii’s agricultural industry. A variety of ideas to address these issues are identified in tabular format. Flow charts linking important organizations promoting Grow Local initiatives and marketing campaigns in Hawaii are identified as well.

Volume II includes a summary of the “Complete Eats Legislation: the Farm Bill and Food Systems” study that was published in the April 2012 edition of Planning and Environmental Law. This article examines how planners can utilize the Food, Conservation, and Energy Act of 2008 (Pub.L. 110-234, H.R. 2419, 122 Stat. 923, enacted May 22, 2008), known as the “2008 Farm Bill”, to promote food self-sufficiency and food security in their communities. Finally, key facts and frequently asked questions about the 2008 Farm Bill and the FDA Food Safety Modernization Act (Pub.L. 110-353, H.R. 2751, 124 Stat. 3885, enacted January 4, 2011), known as “FSMA,” are provided. FSMA’s purpose is to ensure that the U.S. food supply is safe by shifting the focus of federal regulators from responding to food contamination to one of prevention.

Stakeholder meetings were held in July and August 2012 with private and public parties involved in Hawaii’s agricultural industry. Summaries of these meetings are included in this report.

The Strategy is a living document which provides a first step for continued dialog and the initiation of actions to increase food self-sufficiency and food security in Hawaii.



## Executive Summary

This report is the second volume of a three volume report regarding increased food security and food self-sufficiency in the State of Hawaii. This report was prepared by the Office of Planning in cooperation with the Department of Agriculture. It contains a history of agriculture in Hawaii from 1960 to the present and seven appendices related to technical and other information. These appendices include a matrix discussing issues affecting diversified agriculture in Hawaii, a table and flow chart linking organizations involved in the Grow Local campaigns in Hawaii, a summary of the “Complete Eats Legislation: the Farm Bill and Food Systems Planning” study in Planning and Environmental Law, summaries of the stakeholder meetings held in June 2012, and information and key facts about the 2008 Farm Bill and the FSMA.

The sugar and pineapple plantation era that dominated Hawaii agriculture since the mid-19<sup>th</sup> century peaked in production by the mid-1960s. The decade of the 1960s began with what would be a thirty-year rapid increase in food imports. By the 1980s, Hawaiian plantations had been declining throughout the State, while the production of diversified crops, or crops other than sugar and pineapple, rapidly increased. By 1989, diversified agriculture captured 17% of the agriculture market, up from only 5% in 1959. As the first decade of the 21<sup>st</sup> century began to close, plantation crop production diminished to almost token status, capturing less than 20% of the agricultural market combined. Diversified agriculture captured the remainder of the market and continues to expand.

Issues affecting diversified agriculture are identified in this report. Information was obtained through research and meetings with key industry stakeholders. Each issue was grouped into one of four categories including the cost of doing business; infrastructure and communication issues; training, support, and education issues; and issues that directly affect the Big Island cattle industry. Ideas that have been proposed in prior studies to address these issues are indentified for further evaluation. For example, high input costs and a lack of capital may be eased by using local fertilizers and feed instead of costly imports and developing agricultural collectives to cut costs. The development of farmers’ markets and co-operatives will allow suppliers and consumers to meet face-to-face and determine what commodities are in demand. Encouraging scientists to work closely with farmers can lead to research that directly affect local problems. Farmers who lack food safety certification can attain certification through licensed agents and gain access to larger markets and venues like Costco, Whole Foods, or Safeway.

A table describing sixteen programs, marketing campaigns, and organizations involved in “Grow Local, Buy Local” campaigns throughout Hawaii, accompanied by their sponsors, are provided as well. These campaigns and organizations include the “Buy Local, It Matters” campaign operated by the State of Hawaii Department of Agriculture, the “Grown on Maui” in Maui County, the “Think Local Buy Local” on the Big Island, and projects operated by The Hawaii Farm Bureau Federation and the Ulupono Initiative to name a few. Flow charts illustrating the interconnection between different organizations and agencies involved in Grow Local, Buy Local campaigns are also provided. A summary report of the stakeholder meetings on June 13, 2012 and June 27, 2012 is also included.

In addition, a summary of the “Complete Eats’ Legislation: the Farm Bill and Food Systems Planning” study in the April 2012 edition of Planning and Environmental Law is provided in this report. The summary discusses the 2008 Farm Bill and how planners may influence local agricultural production in their community. Four core food systems are discussed as they relate to the 2008 Farm Bill and planning: food access, farming viability, economic development, and support for local food system plans and policy development. The article also provides an excellent summary of the 2008 Farm Bill funding program.

The United States Department of Agriculture provides a side-by-side comparison of the new provisions in the 2008 Farm Bill with previous legislation. Listed in this report are the provisions important to the overall strategic plan of increasing food security and food self-sufficiency as they appear in the various Titles of the 2008 Farm Bill. Titles in the 2008 Farm Bill that are covered in this report include nutrition, operating credit for farms, rural development, horticulture and organic agriculture, and livestock.

Lastly, key facts and frequently asked questions related FSMA are included in this report. FSMA was passed by Congress on December 21, 2010 and is designed to protect the US food supply by shifting regulation from contamination response to one of prevention. Topics covered in Volume II regarding FSMA include preventive controls, inspection and compliance, imported food safety, response to foodborne illnesses, and developing collaboration and partnerships among local, state, territorial, tribal, and foreign agencies.

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## *The History of Agriculture in Hawaii — a Fifty-Year Snap Shot*

### **Introduction —The Plantation Era**

Early agriculture in Hawaii can be traced back to early settlers who arrived from the Marquesas between 500 and 700 AD. They brought with them taro, sugar cane, bananas, nuts, pigs, chickens, sweet potatoes, and other food items that they managed through small farms throughout the islands. Over the centuries, these early settlers also created extensive fishponds along the coasts to raise aquatic products (Takeguchi, et al 1999; Kikawa, 1994).

By the mid-19<sup>th</sup> century, cattle ranches and single-crop plantations (such as sugar and pineapple) began to dominate agriculture in the Hawaiian Islands. “The plantation era witnessed the boom decades of the sugar and pineapple industries, expanding over thousands of acres of prime agricultural lands.” Cheap land, cheap labor, and close business connections to the Hawaiian monarchy during this era allowed corporations to invest large amounts of capital in plantation development throughout Hawaii. By 1955 pineapple production in Hawaii reached its peak with 76,700 acres and coffee production peaked with 15 million pounds of unroasted coffee beans (Takeguchi, et.al, 1999; Kent, 1993).

With statehood for Hawaii in 1959, “federal funds became available for the development and growth of Hawaii's agricultural industries with funding for programs such as farm credit, natural resources, and statistical services” (Takeguchi, et.al, 1999). Statehood ushered in workers’ rights, leading to an increase in farm and plantation labor costs. Cheaper labor for sugar and pineapple production could be found in India, Cuba, the Philippines, and Puerto Rico and plantation companies began to move their operations abroad. With a strong post-war US economy throughout the 1950s and more affordable air transportation, Hawaii began to see a shift from a plantation dependent economy to a tourist based economy as the 1960s emerged (Takeguchi, et.al, 1999; Kent, 1993).

### **1960-1969 — The Effects of Statehood and the Rise of the Tourism Industry**

The plantation era that dominated Hawaii agriculture since the mid-19<sup>th</sup> century peaked in production by the mid-1960s. The decade of the 1960s began with a thirty-year rapid increase in food imports that coincided with the expansion of the growing tourist industry. Furthermore, unions representing farm workers were able to increase their power and bargaining rights as a consequence of statehood in 1959. Higher labor costs would drive single-crop production to other parts of the world where land and labor were cheaper. The rising tourism trade in Hawaii began to replace agriculture as the dominant industry. (Kent, 1993; Takeguchi et.al., 1999; Loudat and Kasserl, 2009; “Millennium Moments,” 1999).

In 1961, 6,200 farms existed throughout Hawaii. Plantations continued to decline in number of acres from previous years, a trend that would last for decades. Single-crop plantations still dominated agriculture production in Hawaii, with 65,000 acres of pineapple in 1964 providing over 80% of the world's pineapple supply. By 1966, however, Hawaii witnessed a decline in pineapple production that continues to this day. 1966 also saw the year when sugar production peaked with 1.2 million tons of raw sugar. Almost half of the fruits and vegetables consumed on the island, as well as all milk products, were grown locally (Takeguchi et.al., 1999; DOA, 1971; Southchack, 2007; SOH, 1975).

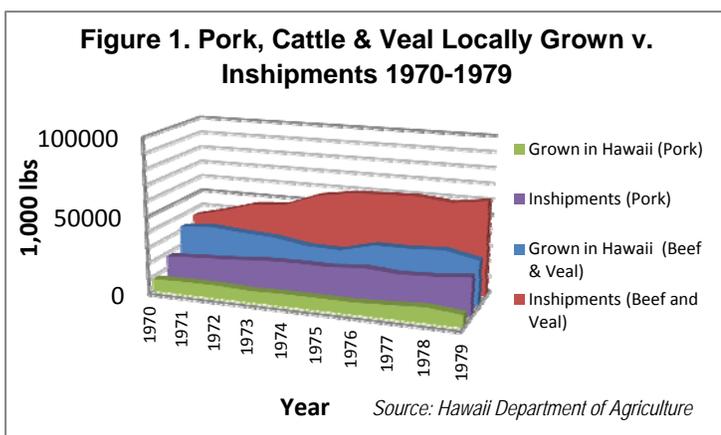
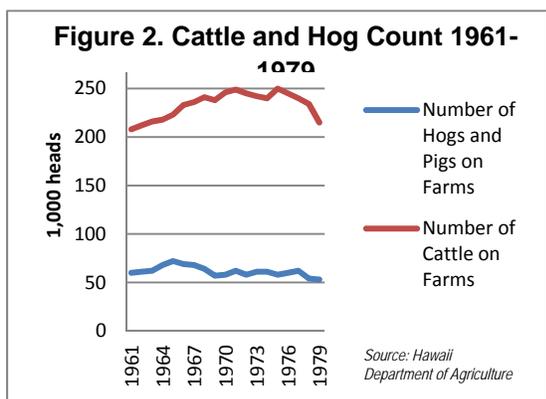
Amongst the Kona coffee traders on the Big Island, a company called Superior Coffees in Chicago contracted with the Kona Farms Cooperative to purchase the entire Kona coffee crop, ultimately leading to the construction of Hawaii's first coffee roasting plant in Honolulu sometime in the mid-1960s. On Molokai, farmers could expand their local farming operations with the completion of the Molokai Irrigation System in 1968. In 1969 the College of Tropical Agriculture and Human Resources (CTAHR) at the University of Hawaii formed the Hawaii Crop Improvement Association to research and promote the newly developed seed crop industry in Hawaii. By the end of the 20<sup>th</sup> century, seed crops would become a dominant market in Hawaii's agricultural industry (Takeguchi et.al., 1999; Loudat and Kasser, 2009).

Pineapple and sugar crop production peaked in the 1960s as the tourism industry surpassed the plantation era as Hawaii's economic leader by the end of the decade. Many companies moved their operations to developing nations where cheaper labor, land, and transportation offered greater profits. These trends continued into the next decade when diversified crop production gained prominence in the agriculture industry.

### 1970-1979 — Rise in Imports

In general, the 1970s saw a decrease in plantation size farming from the previous decade and an increase in diversified agriculture production (everything except sugar and pineapple) including increases in macadamia nut production, the nursery and flower industry, and fruits and vegetables. Pahoia on the Big Island saw the development of the first agricultural park in 1975. A drought that lasted into the late 1970s

made farming difficult and many sugar farmers relied on grants and loans for economic survival. To the dismay of the agriculture industry, Congress did not enact tariffs to protect the nation's sugar industry. However, sugar and pineapple production still led farm receipts. The number of farms decreased overall throughout Hawaii, although cattle, eggs, and milk production increased in contrast to a decline in the number of hogs in Hawaii. Imports for food products and vegetables increased significantly as the tourism trade continued its expansion throughout the state, particularly on Oahu. Locally grown and locally consumed food saw a decline from



the 1960s, a trend that would continue well into the next decade (DOA, 1979; DOA, 1990; Takeguchi et.al., 1999; SOH, 1975).

The beginning of the 1970s witnessed a sharp decrease in the number of farms in Hawaii. Single-crop plantations continued their downward slide as diversified agriculture began to emerge and tourism displaced agriculture as Hawaii's leading industry. As Figure 1 above illustrates, the inshipments (imports) for beef, veal and pork increased significantly throughout the decade largely in response to the expanding tourist industry. The

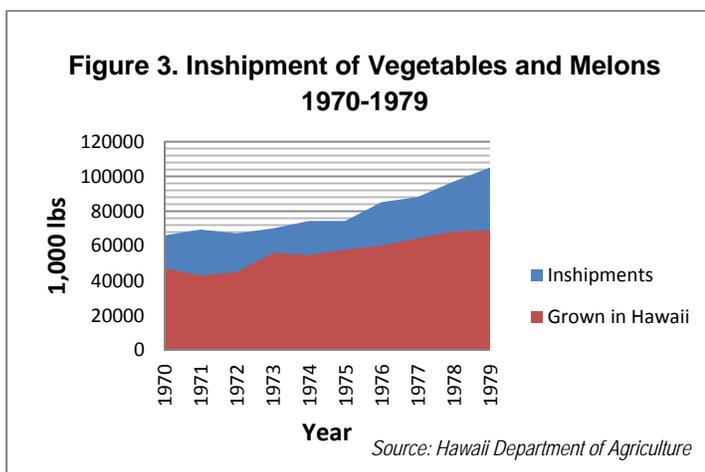
number of planted acres for sugarcane decreased approximately 4% between the mid-1960s and the mid-1970s. Pineapple acreage also decreased more than 12% for the same time frame. Pineapple canneries in Hawaii were reduced by two-thirds in number to only three throughout the state (DOA, 1971; DOA, 1976; DOA, 1980; "Millennium Moments," 1999; Takeguchi et.al., 1999).

As Figure 2 above demonstrates, the number of hogs on farms increased slightly since statehood and then began to taper off toward the end of the 1970s, while cattle levels remained relatively stable throughout the same time period. However, both cattle and hog farm numbers decreased significantly throughout the beginning and end of the 1970s (55% and 62% respectively). 1979 saw a significant decrease in the number of on-farm heads of cattle at a national level, a trend that also affected Hawaii. In addition, the state-wide hog inventory also dropped to only 53,000 pigs in 1979, a thousand pigs less than 1978's record low (DOA, 1971; DOA, 1980).

The number of milk and egg farms also decreased in Hawaii during the 1970s, down from 120 milk farms and 240 egg farms in 1970 to only 70 and 60 respectively by 1979. Milk farms decreased by 42% between 1970 and 1979 and egg farms declined substantially— 75% during the same time frame. The number of chickens on farms in Hawaii increased dramatically, however, from 806,000 pounds in 1959 to 1.3 million pounds in 1979. In addition, milk production increased from 146.0 million pounds in 1975 to 150.0 million pounds in 1979. Regardless of the substantial decline in the number of egg and milk producing farms around Hawaii, the state still increased egg production by 9% between 1975 and 1979 and produced locally grown eggs at significantly higher rates than imports provided. Although a very small level of egg imports captured the market share between 1960 and 1979, Hawaii maintained self-sufficiency in egg production through the 1970s (DOA, 1971; DOA, 1976; DOA, 1980; Schmitt, 1977).

While fruit and vegetable farms in Hawaii decreased in overall farm numbers, planted acres increased significantly. Fruit acreage increased 42% between 1964 and 1974. Vegetable farms increased 12% during the same time period. Macadamia nut production saw a significant and rapid increase from the prior decade production numbers and flower and nursery products climbed into the top three most valuable crops by 1979. Furthermore, the number of small farms (3-9 acres) increased from 1,008 in 1964 to 1,853 in 1970. Many of these small farms produced a more diversified selection of crops than the larger, single-crop plantations that produced sugar and pineapple (DOA, 1971; DOA, 1976; DOA, 1980; Schmitt, 1977).

Despite a 31% increase in imported vegetables between 1961 and 1970, a 32% increase in locally grown vegetables from Hawaii in the 1970s occurred as well. As Figure 3 to the right illustrates, by 1979 vegetable production reached 69.08 million pounds in Hawaii with vegetable inshipments rising 30% between 1975 and 1979. Vegetable imports, however, exceeded local production by the end of the Seventies with 105.16 million pounds imported as the graph to the right illustrates. Corn, cabbage, and lettuce would become



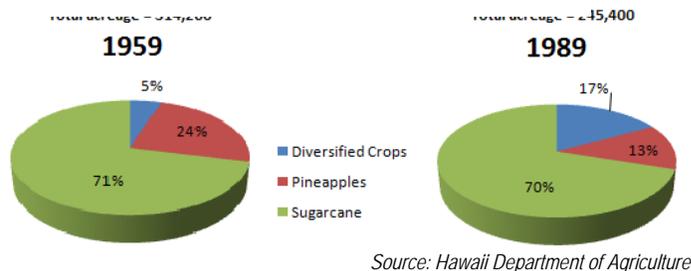
the favored vegetable crops grown in Hawaii and papayas would dominate the local Hawaiian fruit market. In addition, fruit inshipments exceeded local production by more than 3.5 times in 1979 and overall fruit production in Hawaii decreased to 16.9 million pounds in the same year (down from 20.27 million pounds in 1975). By 1974, Hawaii produced 42% of fresh market vegetables consumed in the state; 34% of all fruits consumed; all milk consumed; 35% red meat of all consumed; 18% of all poultry meat consumed; and 91% of all eggs consumed (DOA, 1971; DOA, 1975; DOA, 1976; DOA, 1980; DOA, 1981; SOH, 1975;).

The 1970s witnessed the continual decline in plantation size production levels. Most importantly, planted acreage for pineapple and sugar declined, while food inshipments outpaced locally grown food to meet the growing tourist demand. The overall numbers of farms in Hawaii also declined, but Hawaii still increased its chicken, milk, and egg output while the number of cattle and hogs declined and beef and pork inshipments increased. The 1970s also saw a rise in smaller farms with more diversified fruit and vegetable products. Planted acreage for fruit and vegetables rose and diversified production in flower and nursery products and the macadamia industry sharply increased.

### 1980-1989 — The Emergence of Diversified Agriculture Production

The 1980s saw the continual decline in overall farm acreage and the rapid increase in diversified crops. Throughout the state, sugar and pineapple farms decreased in numbers as more diversified crops were planted in abandoned sugar lands. By 1980 the contribution of agriculture to Hawaii’s economy reached almost \$1 billion dollars, the highest ever recorded in the state’s history. High sugar prices made up the bulk of sales, but diversified agriculture played a greater role in Hawaii’s agricultural economy than before. Vegetables and melons continued the trend in diversified agriculture; the numbers of acres planted rose, rising 50% between 1975 and 1985, but dropping off 8% between 1985 and 1989. Fruit production also increased 61% in numbers of acres planted between

**Figure 4. Cultivated Agricultural Land State of Hawaii**



1975 and 1989 (DOA, 1981; DOA, 1976; DOA, 1986; DOA, 1990).

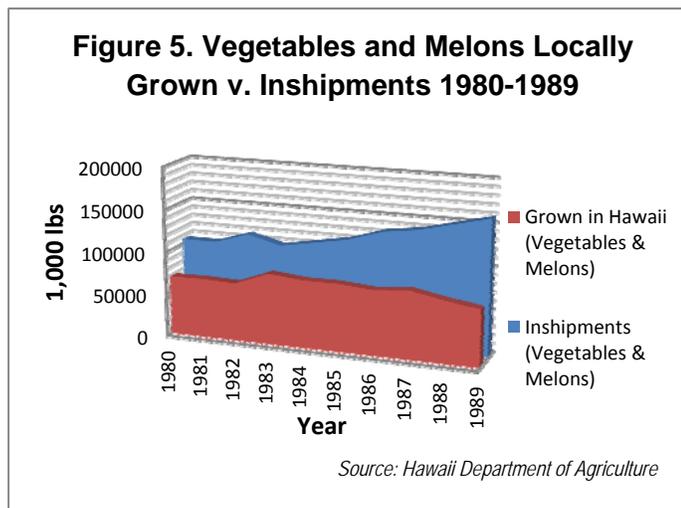
By 1989, total cultivated agricultural lands declined to 245,500 acres from 314,260 acres in 1959 as Figure 4 above illustrates. Although sugarcane and pineapple still accounted for the bulk of total acreage, diversified crops such as macadamia nuts, horticulture, ginger, papayas and vegetables and melons increased an incredible 70%, up from only 5% in 1959 to 17% in 1989 as shown in the illustration above. In addition, ginger production reached a record level of 3.6 million pounds in 1982 (Takeguchi et.al., 1999; DOA, 1990).

The number of pineapple and sugar farms in Hawaii continued their downward trend as well. From 1975 to 1989 the number of sugar and pineapple farms decreased 87% and 50% respectively. However, diversified crops such as vegetables and melons, fruits other than pineapple, macadamia nuts, taro, and the ever expanding flower and nursery product industry showed significant gains in the farm numbers during the same time frame (DOA, 1976; DOA, 1981; DOA, 1986; DOA, 1990).

By 1989, the number of cattle farms increased 12.5% from 1979, but declined almost 50% from 1961 numbers. By 1989 Hawaii produced 34.5 million pounds of beef, bringing it to almost the same production level as 1970 after a decline in production in the mid-1970s and early 1980s. Hog farms continued to decline throughout the 1980s from their higher numbers in the 1970s (DOA, 1971; DOA, 1980; DOA, 1990).

The number of milk and egg farms continued to follow a downward trend from the early 1970s. Milk farms decreased to 80 by 1989 (down from 120 in 1970), egg farms decreased to 55 (down from 240 in 1970) for the same year. By 1989, the numbers of milk farms declined by one-third and egg farms were reduced to about one-fifth of their 1970 numbers. However, milk production climbed to 154.0 million gallons in 1989. This is a 1 million pound increase from 1979. Egg production, on the other hand, decreased from 1.91 million dozens of eggs in 1979 to 1.89 million dozens of eggs in 1989. Still, egg production in Hawaii exceeded inshipments in 1989 by a ratio or more than 1 to 10. In 1980 there were 7.9 million pounds of chickens in Hawaii and by 1989 the number increased slightly to 8.0 million pounds (DOA, 1971; DOA, 1981; DOA, 1980; DOA, 1990).

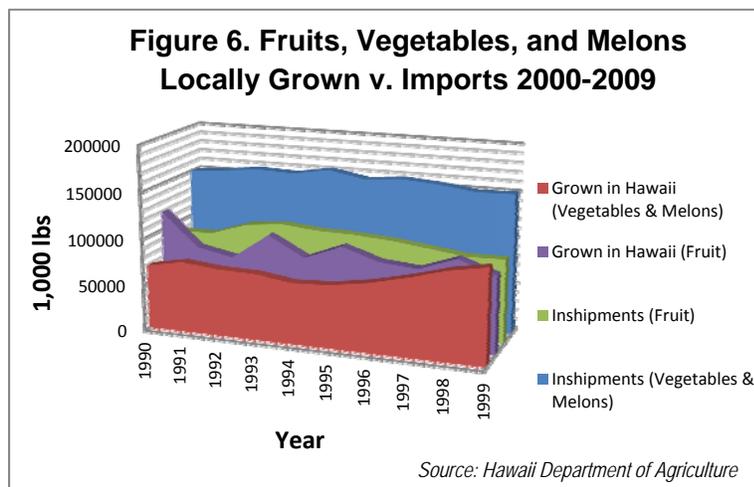
Diversified crop production in the vegetable and fruits industries increased throughout the decade. Although flower and nursery products led diversified agriculture in production and value, fruit, vegetables, milk, and cattle captured a large share of the diversified agricultural market. 1989 saw the production of 68.2 million pounds of fresh vegetables and melons (down from 76.2 million pounds of in 1986), a decrease of 10% over a three year period. In addition, the volume of crop marketings for fruit increased to 109.98 million pounds in 1989, up 49% from 1979 (DOA, 1980; DOA, 1990; DOA, 1991).



The 1980s was a decade that saw a modest decline in acreage used for sugar production and a steep decline in pineapple acreage, a trend that began in the 1960s. The amount of beef produced per pound returned to early 1970 levels after on-and-off years of decline. Pork production continued to decline, however, following trends established in the early 1970s. The number of egg and milk farms continued to decline as well, yet egg production outpaced inshipments by significant levels throughout the 1980s. In addition, milk production continued to increase slightly throughout the decade. Inshipments of beef, pork, and vegetables still surpassed locally grown alternatives. Fruit inshipments closely tied locally grown fruit throughout the later part of the decade due to the inclusion of pineapples and other fruits not counted in past summaries. Diversified crop production stands out as the dominant trend in the 1980s, as nursery products and fruit and vegetable production led the way in capturing a larger share of agriculture's contribution to the economy in Hawaii.

## 1990-1999 — The End of the Plantation Era

The 1990s witnessed the mass closing of numerous sugar and pineapple operations throughout Hawaii. In 1992, Dole Packaged Foods Company closed its Lanai plantation and its Iwilei Cannery. 1994 was the last year Hamakua Sugar Company harvested its sugar crop and Hilo and Oahu Sugar closed the following year. In 1996, Ka`u Sugar and Waialua Sugar closed their operations and in 1999 Lahaina would harvest its last sugar crop. Total acreage for planted sugar in Hawaii declined by 64% between 1999 and 1986. Of the 120 sugar farms in Hawaii in 1986, only 4 remained by 1999. The total acreage for planted pineapple in Hawaii also suffered — 1999 saw only 21,000 active



acres, a 39% decline from the mid-1980s (Takeguchi et.al., 1999; DOA, 1990; DOA, 2000).

The decade also observed record sales in the diversified crop industries. 1997 saw the farm value of diversified agriculture exceed \$300 million for the first time. In Hamakua, Hawaii commercial eucalyptus plantations filled-in abandoned sugar fields and the ginger industry reported a record year with 18 million pounds of production in 1998. In 1994, the Waiahole Ditch Contested Case set the process for the allocation of water by the state's Water Commission, allowing for increased use of plantation irrigation systems for diversified agriculture. Since its inception in the 1960s, the seed business grew into a \$27 million industry and ranked seventh among diversified crops by the end of the 1990s. Although aquaculture operations declined slightly between 1995 and 1999, shellfish and finfish production doubled while algae production increased modestly. As Figure 6 above illustrates, the ratio of inshipments to locally grown fruits and vegetables and melons remained relatively stable throughout the decade (Takeguchi et.al., 1999; DOA, 1991; DOA, 1996; DOA, 2000; DOA, 2001).

Table 1. Top 10 Crops			
1990 and 1999			
1990		1999	
Sugarcane	1	Pineapples	1
Pineapples	2	Sugarcane	2
Macadamia Nuts	3	Macadamia Nuts	3
Papayas	4	Milk	4
Potted Foliage Plants	5	Seed Crops	5
Anthuriums	6	Coffee	6
Coffee	7	Cattle	7
Ginger Root	8	Papayas	8
Seed Corn	9	Eggs	9
Bananas	10	Bananas	10

Source: Hawaii Department of Agriculture

Among other diversified crops, fruits other than pineapple saw a modest 14% growth in number of acres throughout Hawaii, but a substantial 87% jump in number of farms between 1990 and 1999. Table 1 above illustrates diversified agriculture rankings at the beginning and the end of the 1990s. Table 2 below ranks the top crops during the same time period (DOA, 1990; DOA, 1991; DOA, 2000).

1998 also saw a 53% increase in banana production from 1997, with 21 million pounds produced. Vegetable and melon acreage increased 55% between 1990 and 1999. In addition, the number of farms for vegetables and melons more than doubled for the same time period. Volume of crop marketings for vegetables and melons increased 48% during this era as well (DOA, 1990; DOA, 2000).

The number of cattle farms in Hawaii remained relatively stable throughout the decade at about 800, while heads of cattle decreased 6% between 1992 and 2000. The volume of crop marketings for cattle slid throughout the decade from 29 million pounds in 1990 to 7.85 million pounds in 1995. The number of hog farms reduced 50%, down from 500 in 1990 to only 250 in 1999. Milk farms decreased as well, down from 80 in 1990 to only 50 in 1999 and milk production plunged to 119.7 million pounds in 1999—the lowest amount in 39 years. Egg producing farms remained stable throughout the decade at 55; however, the number of eggs produced sharply declined 34% between 1991 and 1999. In addition, the number of chickens excluding broilers in Hawaii declined a sharp 41% between 1991 and 1999 (DOA, 1990; DOA, 1991; DOA, 1996; DOA, 2000).

Agriculture in the 1990s is defined by the significant rise in diversified crop industries. Pineapple remained the state’s leading commodity, but 1999 saw the sixth record high year for the diversified agriculture sector. Although flower and nursery products account for highest crop values, gains in farm receipts for vegetables and melons, ginger root, flowers and nursery products, aquaculture, seed crop and research and sales, and bananas led the diversified agriculture sector. The 1990s witnessed a rise in total number of leading crop farms as smaller “mom and pop” diversified agricultural farms filled the replacement of single-crop plantations (DOA, 2001).

**Table 2. Diversified Agriculture Ranked by Value**

Diversified Agriculture Ranked by Value 1990		Diversified Agriculture Ranked by Value 1999	
Flowers and Nursery Products	1	Flowers and Nursery Products	1
Vegetables and Melons	2	Vegetables and Melons	2
Macadamia Nuts	3	Macadamia Nuts	3
Milk	4	Milk	4
Cattle	5	Fruits (excluding pineapples)	5
Fruits (excluding pineapples)	6	Seed Crops	6
Eggs	7	Coffee	7
Hogs	8	Aquacultures	8
Forage, Grain, and Forest Products	9	Cattle	9
Coffee	10	Eggs	10

Source: Hawaii Department of Agriculture

### 2000-2009 — A Diversified Economy

Drought affected much of Hawaii in the late 1990s, carrying on into the early years of the 21<sup>st</sup> century. Farm level revenues totaled \$521 million in 2000 (the second highest total since the beginning on the 1990s) and increased 17% by 2009 to \$631.2 million. Lower international sugar prices and the closure of two Hawaiian sugar operations in 2000 substantially decreased farm receipts in the sugar industry. By 2009 only two sugar farms remained in Hawaii. Although the diversified agricultural sector posted record farm level revenues in 200 at \$357 million, it could not offset the financial losses from the sugar industry. By 2009, many growers complained of sluggish sales due to the economic recession. Drought and volcanic emissions also contributed to declines in output between 2006 and 2009. As Table 3 to the right illustrates, seed revenue became the most produced crop by 2009, displacing sugarcane and all other commodities (DOA, 2001; DOA, 2011). Furthermore, Table 3 illustrates that diversified

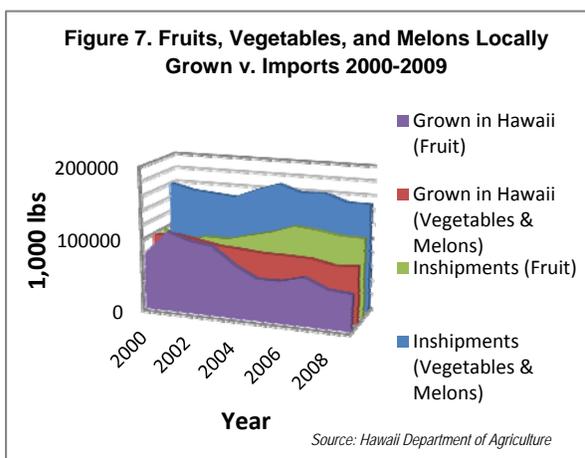
**Table 3. Top Crops 2009**

1) Seed crops
2) Sugarcane
3) Coffee
4) Mac nuts
5) Cattle
6) Algae
7) Papayas
8) Bananas
9) Eggs
10) Milk

Source: Hawaii Department of Agriculture

agriculture, particularly seed crops, as surpassing single-crop production as the top crop of 2009 (the last year HDOA recorded information before fiscal budget cuts).

Agricultural based tourism (ag-tourism) grew throughout the decade, generating \$38.8 million in 2006, a 14% increase from only three years ago. Interest in ag-tourism is increasing as 84 farms either are involved in ag-tourism activities in 2006 or have plans to become involved. The distribution of ag-tourism throughout Hawaii has become more concentrated since 2006 as Hawaii County now accounts for half of the farms with ag-tourism and 34% of the total value; Honolulu County captured 12% of the farms and 37% of the total value; Kauai County comprised for 13% of the farms and 16% of the total value; Maui County accounted for 25% of the farms and remained the only county to show a total value decline from 2003 at 13% (DOA, 2011).



Diversified agriculture saw gains in vegetable and melon production, ginger root, ornamental plants, seed crop research and sales, and banana production. The economic recession in the late 2000's led to a decline in locally grown vegetables and melons by 18% between 2000 and 2009. Although inshipments still outpaced locally grown vegetables and melons, they also declined by 5.6% during the same time period. Inshipments of fresh fruits and vegetables remained much higher than what Hawaii produced in 2009, as Figure 7 to the left demonstrates. To maintain effective crop

growth and development, the prevailing dry conditions throughout Hawaii in 2009 required heavy irrigation. The dry and warm conditions in 2009 elevated insect infestation and led to damaged crops as a result. Seed revenue produced \$226 million dollars in 2009 as new seed crop companies expand throughout the islands in response to growing demand for ethanol production, up 65% from 2005's value of \$77 million dollars. The number of coffee farms increased from 670 in 2000 to 830 in 2009. Hawaii farmers harvested 8.7 million pounds of coffee in 2000 and netted 50 million pounds of macadamia nuts. The number of acres in macadamia nut production declined 7.6% between 2000 and 2009. Ginger root also set record high sales in 2000 at \$8.9 million. By 2000, vegetables, melons, and taro production dropped 2% from a record high in 1999, and then decreased almost 19% by 2009. Aquaculture operations (shellfish, finfish, and algae) also dropped dramatically between 1996 and 2009, with nearly ½ the original operations still in commission (DOA, 2000; DOA, 2001; DOA, 2006; DOA, 2011).

In addition, the first decade of the 21<sup>st</sup> century saw many vegetables and fruits grown in Hawaii capture a large percentage of the local Hawaiian market. By 2007, Hawaiian grown tomatoes accounted for 77% of the tomato market in Hawaii and locally grown watercress accounted for 98% of the watercress market in Hawaii. Hawaiian grown sweet potatoes captured 76% of the sweet potato market in Hawaii. Hawaiian grown ginger root made up 88% of the ginger root market in Hawaii and only 25% of sweet corn and cucumbers were imported to Hawaii. Locally grown cabbage also dominated the cabbage market in Hawaii, with 91% of Chinese cabbage and 85% of mustard cabbage grown locally. In the fruit sector, only bananas and watermelons captured a significant level of the market share in Hawaii, with 61% and 77% respectively. By

the end of 2007, 34% of all vegetables and 36% of all fruits were grown locally in Hawaii (DOA, 2008).

Drought conditions forced cattle ranchers to reduce herd sizes in 2000 and the number of farms decreased to 800 in 2000 (down from 850 in 1996), leading to increased marketing and thus more improved cattle prices in 2000. However, the number of cattle farms climbed by 2009 to 1,000. Cattle farms are found mostly on the Big Island, then Maui, Kauai, with a few remaining on Oahu. The volume of cattle throughout the decade remained stable at approximately 6.6 million pounds (dressed weight). The value of livestock sales increased from \$19.2 million dollars in 2000 to \$28.95 million dollars in 2009 (DOA, 1995; DOA, 1996; DOA, 2000; DOA, 2001; DOA, 2006; DOA, 2011).

On the other hand, hog farms remained steady throughout the decade at 230 although hog and pig head count dropped 54% between 2000 and 2009. The majority of hog operations are located on the Big Island and Oahu, then Maui and finally Kauai. The volume of pigs and hogs throughout the decade declined significantly from 5.5 million pounds (dressed weight) in 2000 to 2.8 million pounds (dressed weight) in 2009. The value of pig livestock sales declined from \$4,553,000 in 2005 to \$2,996,000 to 2009 (DOA, 2001; DOA, 2006; DOA, 2011).

Hawaii's milk output declined 74% from 1996 to 2007, decreasing from 129 million pounds a year to 33.2 million pounds a year respectively. Milk production declined 70% from 2005 to 2009 alone. As recently as 1980 Hawaii was totally self-sufficient in milk production and had two dozen dairy farms. Between 2000 and 2011, fifty milk farms closed, including four dairies on Oahu and three on the Big Island. Only two milk farms remain in Hawaii. Both milk farms are located on the Big Island, which produce milk almost exclusively for that island. The rapid decline in the number of milk farms in Hawaii throughout the 1990s and 2000s has made Hawaii more dependent on Mainland milk and more vulnerable in emergency situations, such as a dock strike (Hao, 2008). Due to the decline in production and demand for local milk, the value of sales for milk rose 27% between 2008 and 2009 (DOA, 2011).

Egg farms increased by 45% between 2000 and 2009, with 100 egg farms operating toward the end of the decade. Egg production, however, declined drastically between 2000 and 2009. In 2000, 143.4 million eggs were produced in Hawaii and in 2009 69.5 million eggs were produced, a 52% decline. The total number of on-farm chickens declined 48% between 2000 and 2009 as well (DOA, 2001; DOA, 2011).

As Table 4 on the next page illustrates, top crops produced between in 1990 and 2009 have shifted from plantation era leading crops to more diversified agricultural crops. In terms of farm value, sugarcane decreased 80% between 1990 and 2009. Although sugarcane has remained profitable, the dwindling number of farms and acreage dedicated for sugar production continues its downward spiral. Diversified agriculture increased by 39% between 1990 and 2006. Seed crop production and expansion dominate the decade, while cattle, coffee, and macadamia nut production follow. Pineapple production has diminished to almost token status. Algae production and aquaculture have come into demand as marketable crops (DOA, 2011).

**Table 4. Farm Values, State of Hawaii, 1990-2009**

Year	Sugar (unprocessed cane)	Pineapple (fresh equivalent)	Diversified Agriculture <sub>1</sub>	Total <sub>2</sub>
1,000 dollars				
1990	213,800	106,365	275,789	595,954
1991	174,900	107,775	268,707	551,382
1992	153,700	102,100	264,427	520,227
1993	163,000	79,850	271,094	513,944
1994	160,100	78,890	273,826	512,816
1995	127,700	87,360	291,632	506,692
1996	108,100	95,914	307,329	511,343
1997	85,500	91,721	327,484	504,705
1998	87,300	92,776	329,886	509,962
1999	86,800	101,448	342,846	531,094
2000	62,200	101,530	358,170	521,900
2001	57,800	96,337	370,241	524,378
2002	64,300	100,616	374,602	539,518
2003	64,400	101,470	382,253	548,123
2004	61,500	83,104	407,453	552,057
2005	58,900	79,288	444,597	582,785
2006	50,200	73,652	455,738	579,590
2007	47,600	3	3	577,999
2008	44,200	3	3	605,570
2009	44,200	3	3	631,170

<sup>1</sup> Aquaculture included beginning 1993

<sup>2</sup> Includes all agricultural commodities

<sup>3</sup> Pineapples and diversified agriculture not shown separately to avoid disclosure of individual operations, but included in total farm value

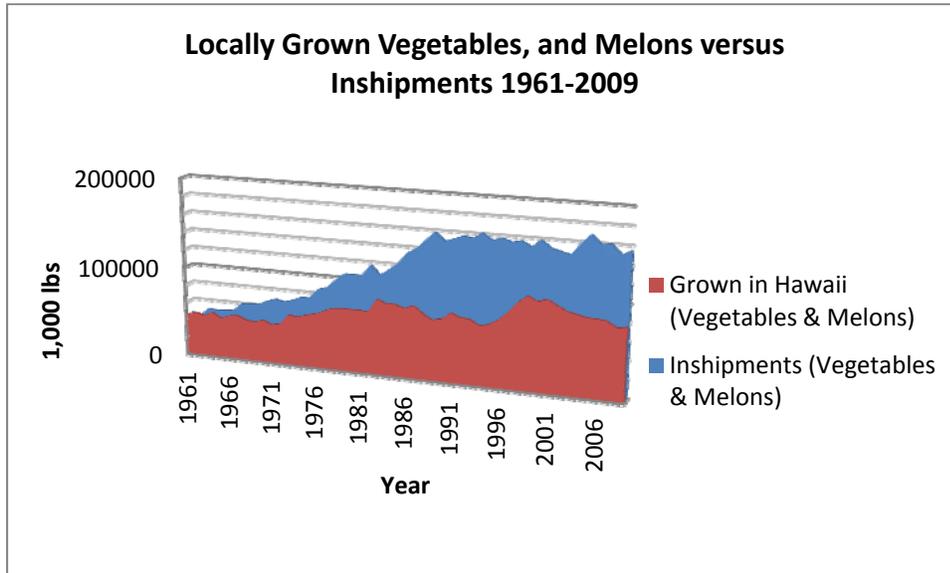
Source: Hawaii Department of Agriculture

## Conclusion

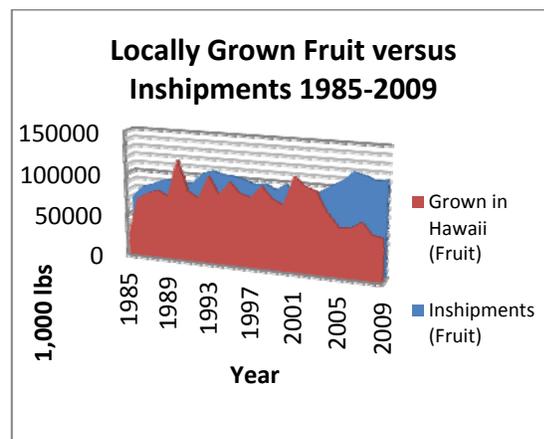
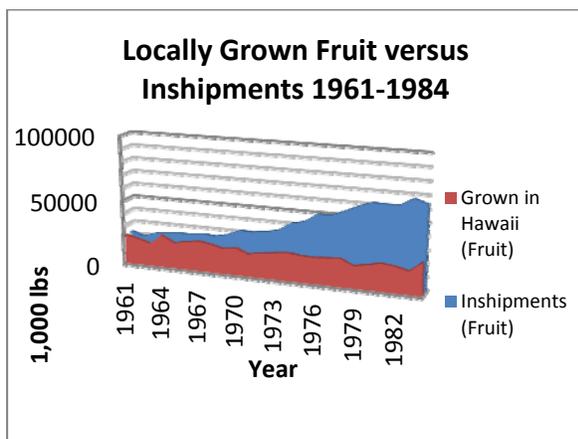
Sugar and pineapple plantation systems dominated agriculture in Hawaii until about the mid-20<sup>th</sup> century. As Hawaii's economy began to cater to the growing tourist industry, agricultural imports greatly increased to meet the growing demand. After the 1960s, plantation systems began to decline in numbers and diversified agriculture and resorts moved into abandoned plantation farms. Local production of agricultural goods could not keep up with the growing demands of imports from abroad. By the end of the 20<sup>th</sup> century diversified agriculture dominated crop production, capturing 80% of the agricultural market in the first decade of the 21<sup>st</sup> century while the plantation system declined to near extinction.

Although the last two decades have seen diversified crops supplant the plantation era single-crop production, inshipments of vegetables and fruits still greatly exceed what is locally grown throughout the State of Hawaii. In addition, the decline of other locally produced commodities such as hogs, eggs, milk, chickens, and cattle since statehood indicate that Hawaii is still far from being food self-sufficient.

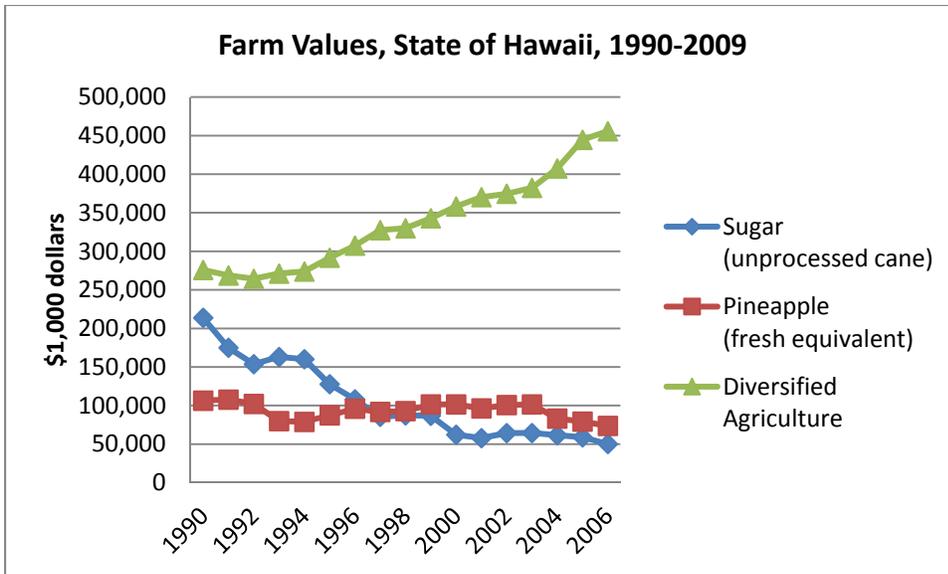
**Figures Related to Agricultural Output for Hawaii between 1960-2007**



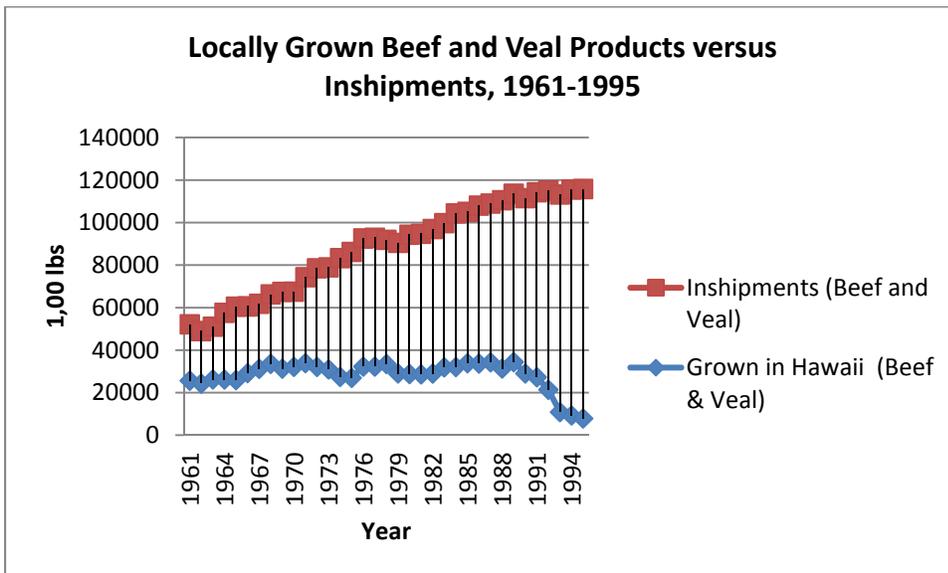
(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture 1961-2009; Average calculated for 1997, 1998, 2009)



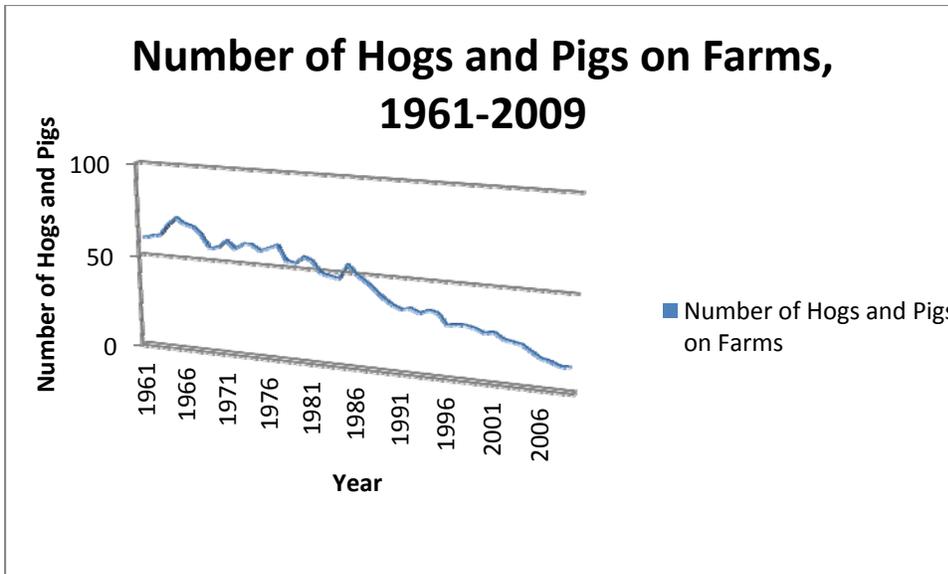
(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture, 1961-2009 Average calculated 1997, 1998, 2000. From 1985-2009 pineapples and other fruits not included in previous years are summarized).



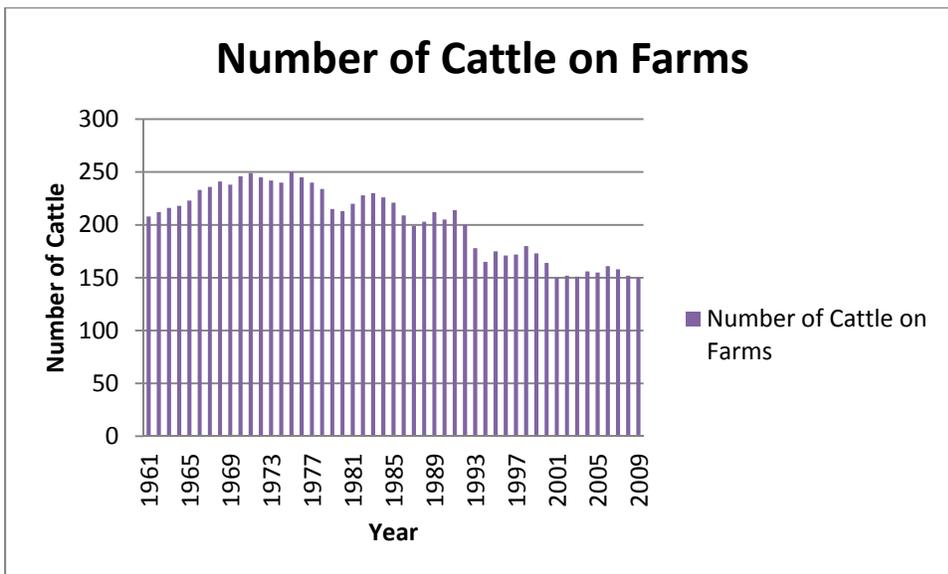
(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture, 1990-2006).



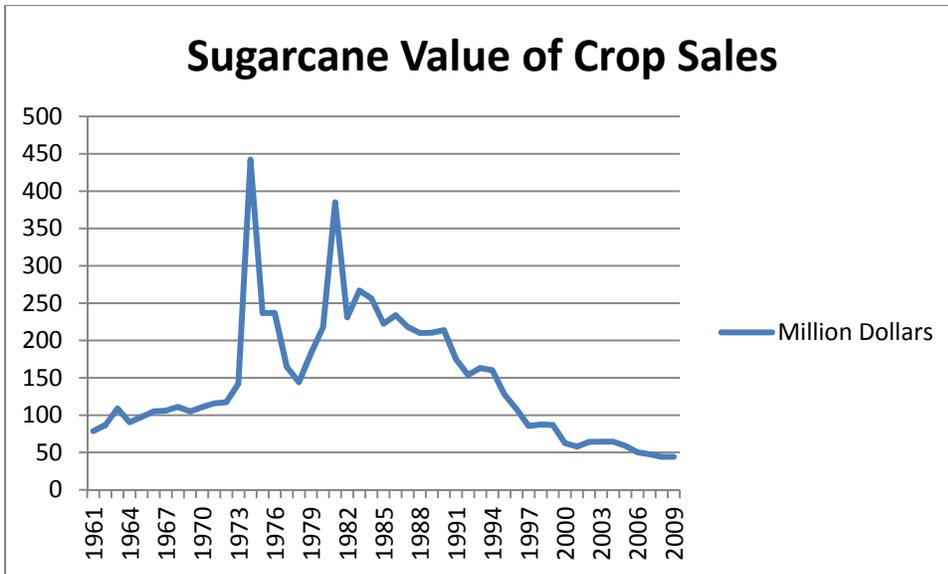
(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture, 1961-1995).



(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture, 1961-2009).



(Adapted from data the Statistics of Hawaii Agriculture prepared by the Hawaii Department of Agriculture, 1961-2009).



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### ***Figures and Tables***

**Figure 1.** Department of Agriculture (DOA). Statistics of Hawaiian Agriculture 1970, 1978, 1990, 1995. Prepared by Hawaii Crop and Livestock Reporting Service. Published by the US Department of Agriculture's Statistical Reporting Service in cooperation with the Hawaii Department of Agriculture, 1971, 1979, 1991, 1996.

**Figure 2.** DOA. Statistics of Hawaiian Agriculture 1970, 1975, 1978, 1979. Prepared by Hawaii Crop and Livestock Reporting Service. Published by the US Department of Agriculture's Statistical Reporting Service in cooperation with the Hawaii Department of Agriculture, 1971, 1976, 1979, 1980.

**Figure 3.** DOA. Statistics of Hawaiian Agriculture 1970, 1974, 1975, 1980. Prepared by Hawaii Crop and Livestock Reporting Service. Published by the US Department of Agriculture's Statistical Reporting Service in cooperation with the Hawaii Department of Agriculture, 1971, 1975, 1976, 1981.

**Figure 4.** DOA. Statistics of Hawaiian Agriculture 1990. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture, 1991.

**Figure 5.** DOA. Statistics of Hawaiian Agriculture 1985, 1989, 1990. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture, 1986, 1990, 1991.

**Figure 6.** DOA. Statistics of Hawaiian Agriculture 1990, 1995, 1999, 2000. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture, 1991, 1996, 2000, 2001.

**Figure 7.** DOA. Statistics of Hawaiian Agriculture 2000, 2005, 2009. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture, 2001, 2006, 2011.

**Table 1.** DOA. Statistics of Hawaiian Agriculture 1990. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture's Marketing Division. p.19; 1991.

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**Table 2.** DOA. Statistics of Hawaiian Agriculture 1990. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture's Marketing Division. p.13; 1991.

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**Table 4.** DOA. Statistics of Hawaiian Agriculture 2009. Prepared by Hawaii Agricultural Statistics Service. Published by the US Department of Agriculture's National Agriculture Statistics Service in cooperation with the Hawaii Department of Agriculture's Development Division. p.7; 2011.



# APPENDICES



## **Introduction to Appendices**

Appendices A, B, C, and D are self-explanatory. Appendix E: Summary of “Complete Eats” Legislation: the Farm Bill & Food Systems Planning is provided primarily because it contains an excellent summary of the 2008 Farm Bill funding program.

Appendix F: The 2008 Farm Bill and Appendix G: Key Facts and FAQs About the Food Safety Modernization Act are provided because they are referenced in the Increased Food Security and Food Self-Sufficiency Strategy (Strategy) and further explanations of these documents will help the reader understand the issues in the Strategy.



## **Appendix A:**

# **Compilation From Literature Review: Diversified Agricultural Issues**



Table 5 is a compilation from a literature review which provides a list of issues/barriers affecting diversified agriculture in Hawaii. These ideas require further evaluation and analysis. Each issue/barrier is given an identification number listed in the ID# column. The reference(s) for each issue/barrier is linked to a corresponding reference(s) number in the Ref.# column. The numbered list of references is located after Table 5 in the Bibliography.

<b>Table 5. Compilation From Literature Review: Diversified Agricultural Issues</b>					
	<b>ID#</b>	<b>Ref. #</b>	<b>Issues</b>	<b>Description</b>	<b>Ideas for Further Evaluation</b>
<b>Cost of Doing Business</b>	1	14	High input costs/lack of capital.	Fertilizer, equipment, feed, seed, energy and other costs of production.	Locally produced fertilizers, feed, seed should be more cost effective (low crop yields and high fertilizer costs offset profits). Biofuels should be more frequently used; better accounting methods should be implemented; grants and loans need to be made more available to farmers; agricultural collectives can cut costs due top economies of scale. Aquaponics need to use fish culture to irrigate and fertilize plants.
	2	1	Lack of farm worker housing.	Need to house workers efficiently.	The State Land Use Law (HRS Chapter 205) allows farm dwellings and employee housing within the Agricultural District, when these dwellings are used in connection with a farm or where agricultural activity provides income to the family occupying the dwelling. However, due to the lack of enforcement and overly permissive granting of special use permits, many dwellings located within the Agricultural District are transient vacation rentals (TVR) or bed and breakfasts (B&B) not connected with a farm or agricultural activity that generates income. In many cases, a token amount of farm income justifies allowing additional dwellings within the Agricultural District. These conditions lead to a lack of farm worker housing by accelerating agricultural decline due to farmers' disinvestment in their farm operations in anticipation of development and the selling of agricultural lands to non-farmers whose primary objective is income producing TVRs and B&Bs.
	3	1	High cost of labor.	High cost of living, low wages make labor acquisition difficult.	
	4	1	High cost of land (with the exception of Kamehameha leases on the Kona side).	Expensive land makes small-scale farming difficult. 'It is not cost efficient to grow cucumbers on a \$95,000 one-acre piece of land.'	Using state lands for agricultural use will increase supply of land for farmer. Land banking and agriculture subdivisions for long-term leases may alleviate high land costs; low interest loans; state/fed government grants will help with expensive rents.

**Table 5. Compilation From Literature Review: Diversified Agricultural Issues**

	ID#	Ref. #	Issues	Description	Ideas for Further Evaluation
<b>Cost of Doing Business</b>	5	7	Excessive number of certifications to compete in market.	Expensive and numerous safety and quality and control certifications make it cost inefficient for smaller farms to compete.	Develop a Q&C standard in Hawaii, led by HDOA in conjunction with the College of Tropical Agriculture and Human Resources (CTAHR), which may also act as a brand. One relatively cheap GAP certification for small farms through HDOA may solve this.
	6	15	Affordability of liability insurance needed to sell to grocers.	Most growers have general liability insurance for farms. Need extra for-sale insurance to cover food when selling to grocer.	Co-ops and other organizations where farmers can buy for-sale, product liability insurance.
	7	15, 20	Food security programs.	Lack of Good Agricultural Practices (GAP) procedures/ third party-party food safety certification programs.	Establish and instill good agricultural practices that may be utilized by farms throughout the state.
	8	14	Lack of diversified income on farms.		Promote appropriate agri-tourism, the development of farm tours, and the production of biodiesel. Drawbacks are that these uses compete with use of the land for agricultural means.
	9	11	Historical focus of state on providing support to plantation agricultural needs instead of recent diversified agricultural needs.		Provide direction and support to DOA so that it will be better able to respond to current needs.
	10	22	Small local population levels.	Small local consumer populations force farmers to rely on export markets.	Promote local consumption of foods through local marketing campaigns.
	11	22	Cost challenges for the Agribusiness Development Corporation.	If a large farm were to close or leave, costs and rents could significantly increase as compared to having a minimal effect if a smaller farm closed. Yet, larger farms raise costs related to safety and environmental monitoring than smaller farms.	

**Table 5. Compilation From Literature Review: Diversified Agricultural Issues**

	ID#	Ref. #	Issues	Description	Ideas for Further Evaluation
	12	19	High taxes.	Make entering the market difficult.	Tax cuts and subsidies in the form of health care and workers comp for small farms.
<b>Infrastructure and Communication Issues</b>	13	19	Access to agriculture supported waters.	Since plantation systems have declined, reservoirs have been drained and water access limited.	Watershed programs through USDA, the US Army Corps of Engineers, US Bureau of Reclamation; develop rainwater catchments and storm water recapture programs; promote an equitable process for water allocation; shift primary water usage from recreational use to agricultural use.
	14	12, 18, 19, 22	Transportation and packaging costs are too high.	Lack of efficient transportation and packaging costs increase cost of doing business.	Greater use of biofuels. More efficient packaging methods such as the flexible retort pouch (a plastic or metal foil laminate pouch used as an alternative to canning methods).
	15	2, 19	Lack of communication between growers.	Growers do not discuss best practices or learn about businesses from successful operations.	The development of co-ops and farm societies where growers can meet and discuss current issues related to agriculture. Utilize websites, email newsletters, and social networking sites as a popular way for growers and customers to connect.
	16	2, 13, 14	Lack of connection between supply and demand.	Lack of market information ("ask and grow" programs) prevents growing what is in demand.	Development of co-ops where growers can meet and discuss contemporary issues; examine what commodities being imported can be replaced by local foods; expand "ask and grow" programs (farmers ask consumers what they want).  Improve marketing to wholesale, retail and institutional buyers: 1) develop a database of farmers and buyers to improve local sourcing 2) develop alternative distribution channels, including consolidation hubs and marketing cooperatives.  Improve direct marketing: Simplifying direct marketing regulations, such as those for farm stands. Promote values based marketing.
	17	19, 22	Lack of distribution (demand and supply channels).	Lack of streamlined distribution of locally-grown food. Lack of access to local and off-island markets. Lack of access to off-island markets.	Central distribution centers needed; develop better distribution channels between the islands to improve market capture.
	18	3, 10, 17, 19, 23	Lack of commercial kitchen	No places to prepare value added products.	Develop more community kitchens in all the counties.

**Table 5. Compilation From Literature Review: Diversified Agricultural Issues**

	ID#	Ref. #	Issues	Description	Ideas for Further Evaluation
<b>Infrastructure Con't.</b>	19	19	The poor enforcement of agricultural laws.	Land that is zoned ag goes to res/com development.	Land designated for agricultural use should be enforced by counties/state.
	20	2	Competition with imports	Costs per unit are higher for small producers making competition difficult.	Grow foods that are imported; increase marketing for "buy local" initiatives.
	21	16	Leasing versus licensed land	Ag lands that are leased are able to acquire loans from banks; licensed lands cannot.	Establish state backed loans for licensed lands.
	23	22	Flooding.	Periodic flooding damages crops.	
<b>Training, Support, and Education Issues</b>	24	1, 3, 8, 10, 17, 23	Need for educational and professional training for growers.	It's hard to compete when education isn't as good as competitors.	Provide more state and federal training and grants; internship programs through local schools and colleges. Agri-tourism and international workers will help alleviate labor and overhead costs.
	25	10, 23	Limited support for young and new farmers.	Too many barriers preventing young people from entering field.	Develop more internships with the University of Hawaii to promote agriculture as a career.
	26	14	Lack of research for small-scale food production and export.	UH and CTAHR needs to become more involved.	Work more closely with CTAHR to address this issue.
	27	19	A poor understanding of linkages between soil biology, ecology, and quality.		Provide a soil health index to rank and monitor different soil types for organic management practices.
	28	19, 16	Invasive species/disease control.	Invasive species arriving via air or sea/a poor understanding of disease control.	Number of agriculture inspectors should be increased; more research on disease control should be supported; need to raise fees to increase inspections; provide biosecurity and inspection facilities.
<b>Big Island Cattle Industry</b>	29	21	The lack of available pasture lands for grazing cattle.	Caused by development and environmental set-aside programs.	Create dual use lands (animal foraged and machine harvested to accumulate stored forage).
	30	21	The lack of stocker and finishing operations.	Limits the potential to market local beef products.	Develop stocker and finishing operations.
	31	4	Tax incentives are too few.	Make entering the market and expansion difficult.	Promote state/fed programs such as input subsidies, tax credits, low-interest agricultural loans, crop insurance, and preferential

**Table 5. Compilation From Literature Review: Diversified Agricultural Issues**

	ID#	Ref. #	Issues	Description	Ideas for Further Evaluation
					purchasing by public institutions can be implemented. However, these measures will have fiscal impacts that need to be considered.
<b>Big Island Cattle Industry Issues</b>	32	25	Lack of enterprise zones.	Lack of tax relief areas inhibit desire to enter market.	Expand the enterprise zones beyond North Kohala.
	33	19	Access to water issues.	Since plantation systems have declined, reservoirs have been drained and water access limited.	Provide capital and increase maintenance improvements to rehabilitate older irrigation systems.
	34	6	Lack of slaughter and processing facilities.	Similar to lack of commercial kitchens, limit ability to prepare value added products.	Develop better processing centers. Slaughterhouses are working at 50% capacity because volume is small. Develop/improve processing facilities (instead of shipping to mainland for value-added). Increase local volume.
	35	5, 6, 24	Lack of sustainable forage systems.	Lack of best practices to maintain grazing lands.	Establish best practice methods including dual land use and GAP.
	36	4, 6, 12	High transportation costs; poorly developed packaging technologies	Lack of efficient transportation and packaging costs increase cost of doing business.	Promote biodiesels, R&D in flexible retort pouch for beef products.
	37	9, 24	Issues with noxious weeds, weed infestations.	Poor quality weeds compete in foraging areas with desired plants.	Promote the use of organic herbicides and Kikuyugrass for forage. The limitations of Kikuyugrass are that it's not very good for harvesting.
	38	6	Not enough high quality cattle to slaughter.	Supply is not meeting demand due in part to wide ranging management styles leading to a lack of cohesiveness.	Increase local volume.



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## **Appendix B:**

# **Flow Chart for Grow Local Programs**



These flow charts illustrate the various grow local programs operating in Hawaii and the different organizations supporting them or providing them with grants.

### **Buy Local, It Matters**

Operated by



Hawaii Department of Agriculture

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### **Grown On Maui**

Operated by



Maui County Farm Bureau

Supported by



Hawaii Farm Bureau Federation



Maui County Office of Economic Development

---

### **Think Local First**

Operated by



Hawaii Alliance for a Local Economy (HALE)

---

### **Hawaii Homegrown Food Network**

Operated and Supported by



Hawaii County Resource Center  
Program



Hawaii'i People's Fund



Hawaii Agricultural Development

The Hawai'i Community  
Foundation

Big Island RC&D Council



## **Eat Local Challenge**

Operated by



Kanu Hawaii

---

## **Kauai Grown**

Operated by



Kauai County Farm Bureau

Supported by



County of Kauai Office of Economic Development

---

## **Kauai Made**

Operated by



County of Kauai

---

## **Made in Hawaii Association**

Operated by



Hawaii Food Industry Association (HFIA)

## Got Choice Think Local

Operated by

The Maui County Office of Economic Development

---

## North Kohala Eat Locally Grown Campaign

Operated by

North Kohala Community Resource Center

Supported by

County of Hawaii Office of Research and Development

Kaiser Permanente

Kanu Hawaii (Also works with Eat Local Challenge)

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## The Kohala Center

Operates

The Hawaii Island School Garden Network

The Laulima Center for Rural  
Cooperative and Agricultural  
Business Development

The Hawaii Public Seed Initiative

---

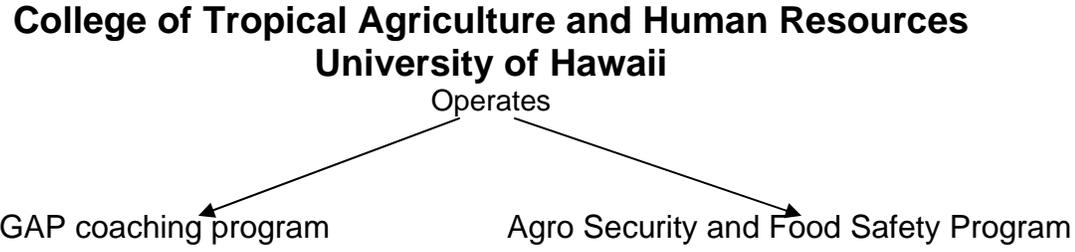
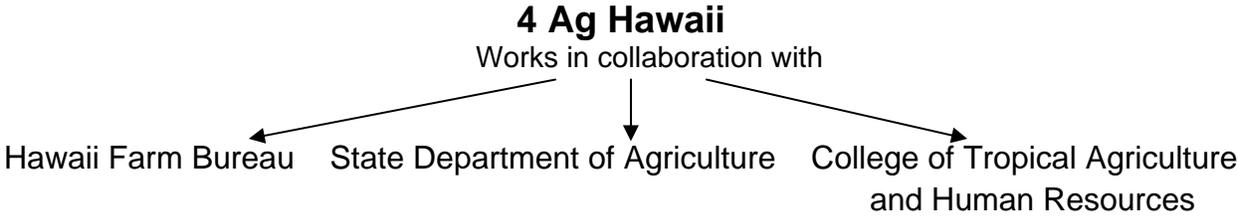
## Ulupono Initiative

Operates

Kapalua Farms

Gives grants to

Ma`o Organic Farms in Waianae  
The Hawaii Island School Gardens Network  
The Kohala Center  
Kanu Hawaii



## **Appendix C:**

# **Grow Local, Buy Local Programs and Marketing Campaigns**



**Table 6. Grow Local, Buy Local Programs and Marketing Campaigns**

	<b>Program or Marketing Campaign Title</b>	<b>Sponsors</b>	<b>Program Summary</b>	<b>Logo</b>
1	Buy Local, It Matters	Hawaii Department of Agriculture.	The <b>Buy Local, It Matters</b> campaign that aims to encourage residents to support Hawaii farmers by making conscious decisions to purchase locally grown produce.	
2	Grown on Maui	Maui County Farm Bureau	The <b>Grown on Maui</b> campaign is a joint effort between Maui County Office of Economic Development and Maui County Farm Bureau. It seeks to expand the market share of local farmers.	
3	Think Local Buy Local	Hawaii Alliance for a Local Economy (HALE); County of Hawaii, Department of Research and Development.	The <b>Think Local, Buy Local</b> pilot campaign to support local, independent businesses on the Big Island of Hawaii. It is supported by the County of Hawaii, Department of Research and Development.	
4	The Hawaii Farm Bureau Federation	Hawaii Farm Bureau Federation	<b>The Hawaii Farm Bureau Federation (HFBF)</b> is a non-profit organization of farming families united for the purpose of analyzing problems and formulating action to ensure the future of agriculture thereby promoting the well-being of farming and the State's economy.	
5	Hawaii Homegrown Food Network		The <b>Hawaii Homegrown Food Network</b> seeks to develop community-based, sustainable, and food self-sufficiency policies in Hawaii.	

**Table 6. Grow Local, Buy Local Programs and Marketing Campaigns**

	Program or Marketing Campaign Title	Sponsors	Program Summary	Logo
6	Eat Local Challenge	Kanu Hawaii; Ulupono Initiative	The <b>Eat Local Challenge</b> is a campaign that promotes education about Hawaii's local food system and encourages the consumption of locally grown foods in Hawaii among the general public. The program currently has 3,000 participants. The yearly challenge was established in 2008. There may be another Eat Local Challenge occurring this year.	
7	Kauai Grown	A cooperation between Kauai County Farm Bureau supported by County of Kauai Office of Economic Development	The <b>Kauai Grown</b> program develops a branded marketing program for locally grown agricultural products in Kauai and recognizes the farmers, ranchers, retailers, and restaurants that bring locally produced products to the consumer.	
8	Kauai Made	County of Kauai	<b>Kauai Made</b> is a program created by the County of Kauai to officially represent the products made on Kauai, by Kauai people, using Kauai materials. Each company has been reviewed and qualified to carry the Kauai Made logo under County ordinance, based on their authenticity and quality as a local product. Kauai Made will be supported by a marketing program to inform visitors about Kauai Made products and drive to point of purchase. A wide range of categories are represented by the Kauai Made logo such as food, beauty, crafts, apparel, music, art jewelry, gifts and others.	

**Table 6. Grow Local, Buy Local Programs and Marketing Campaigns**

	Program or Marketing Campaign Title	Sponsors	Program Summary	Logo
9	Made in Hawaii Association	The Hawaii Food Industry Association (HFIA)	The <b>Made In Hawaii Association</b> was created by the Hawaii Food Industry Association (HFIA) as a means of providing better control and assurance that products sold at the Annual Made In Hawaii Festival are in compliance with Hawaii's Made In Hawaii laws. The festival is produced by the Hawaii Food Industry Association and sponsored by First Hawaiian Bank.	
10	Got Choice Think Local	The Maui County Office of Economic Development	The Maui County Office of Economic Development promotes a <b>Got Choice... Think Local</b> which promotes residential purchase and consumption of locally made and grown products.	
11	Made in Hawaii Festival	Hawaii Food Industry Association	The <b>Hawaii Food Industry Association</b> (HFIA) is a trade organization made up of food retailers, wholesalers, manufacturers, and brokers that act as liaison between government and the food industry in Hawaii. They host the <b>Made In Hawaii Festival</b> , non-profit business incubator that supports locally made products. HIFA also helped create the Hawaii Foodbank.	

**Table 6. Grow Local, Buy Local Programs and Marketing Campaigns**

	Program or Marketing Campaign Title	Sponsors	Program Summary	Logo
12	North Kohala Eat Locally Grown Campaign	A project of the North Kohala Community Resource Center; funded by the County of Hawaii- Office of Research and a development grant from Kaiser Permanente.	The <b>North Kohala Eat Locally Grown Campaign</b> promotes the community goal of increasing the market for local food in the North Kohala community, reducing dependence on imported foods, and building local community capacity by training leaders in the local food movement. In addition, a partnership exists between the Eat Locally Grown Campaign and Kanu Hawaii.	
13	Hawaii Slow Food	Slow Food non-profit	<b>Hawaii Slow Food</b> is a campaign against fast food products in favor of healthier, locally grown food self-sufficiency. Hawaii Slow Food is the local chapter to the nationally based Slow Food non-profit corporation.	
14	Hawaii Organic Farmer's Association		<b>Hawaii Organic Farmers Association (HOFA)</b> promotes organic and sustainable agriculture through research, and education. Organic certification is offered through an Indiana based company called International Certification Services, Inc. In addition, HOFA collaborates with farmers and researchers on projects pertaining to organic and sustainable tropical agriculture in Hawaii.	

**Table 6. Grow Local, Buy Local Programs and Marketing Campaigns**

	<b>Program or Marketing Campaign Title</b>	<b>Sponsors</b>	<b>Program Summary</b>	<b>Logo</b>
15	The Kohala Center	Ulu pono Initiative	The <b>Kohala Center</b> is an independent, not-for-profit, community-based center for research, conservation, and education. It promotes energy self-reliance, food self-reliance, and ecosystem health.. In addition, the Kohala Center operates The Hawaii Island School Garden Network and houses the Laulima Center. The Laulima Center promotes food self-reliance, energy self-reliance, and ecosystem health.	
16	Ulu pono Initiative		The <b>Ulu pono Initiative</b> invests in organizations and companies working to expand Hawaii's supply of locally grown food. It is both a for-profit entity and a non-profit philanthropy. The Ulu pono Initiative operates Kapalua Farms, a 158-acre organic farm and agricultural research facility in West Maui. In addition, the Ulu pono Initiative gives grants and matching funds to Kanu Hawaii and The Hawaii Island School Gardens Network operated by The Kohala Center on the Big Island.	



# **Appendix D:**

## **Stakeholder Summary Reports**



## Facilitated Meetings Summary

The Office of Planning (OP), in cooperation with the Department of Agriculture (DOA), conducted two facilitated meetings during the development of the *Increased Food Security and Food Self-Sufficiency Strategy* (Strategy). The main purpose was to obtain feedback on the twelve identified policy areas within the Strategy. OP wanted to ensure that the policies within the Strategy covered areas in which State government should be the lead. OP also wanted to know if anything was missing, and whether OP was on the right track. Lastly, participants were provided with fake money and asked to allocate that fake money amongst the twelve policies. Participants were also asked to identify funding sources that could be leveraged with state funds. These meetings were conducted on Oahu on June 13, 2012 and June 27, 2012.

Approximately one week prior to the facilitated meeting date, OP provided participants with a copy of the draft Strategy to review. Participants in the first meeting represented state agencies with expertise in agriculture and related areas. Participants in the second meeting represented a diverse mix of stakeholders with expertise in agriculture and related areas. A summary of the allocation of funds is provided on the next page. Notes and materials for the facilitated meetings are provided with this summary.

Meeting participants are provided below.

### June 13, 2012

Barry Brennan, CTAHR  
 Julie-Ann Cachola, DHHL  
 Sharon Hurd, DOA  
 Brian Ishii, DOA  
 Ken Kakesako, DOA  
 Brian Kau, DOA  
 Ping Sun Leong, CTAHR  
 Matthew Loke, CTAHR  
 Jimmy Nakatani, ADC  
 Carol Okada, DOA  
 Glenna Owens, DOE  
 William "Bill" Tam, DLNR  
 Earl Yamamoto, DOA  
 Sylvia Yuen, CTAHR

### June 27, 2012

Brandi Beaudet, Parker Ranch  
 Murray Clay, Ulupono Initiative  
 Kyle Datta, Ulupono Initiative  
 Ken Kakesako, DOA  
 Dexter Kishida, Kokua Hawaii Foundation  
 Brandon Lee, Ulupono Initiative  
 Diane Ley, USDA Farm Service Agency  
 Susan Matsushima, Alluvion Inc.  
 Jeff Melrose, Island Planning  
 Brian Miyamoto, Hawaii Farm Bureau Federation  
 Audrey Newman, Hawaii Green Growth  
 Dean Okimoto, Hawaii Farm Bureau Federation  
 Diane Ragone, National Tropical Botanical Garden  
 Josh Stanbro, Hawaii Community Foundation  
 Tish Uyehara, Armstrong Produce  
 Earl Yamamoto, DOA

### ***Combined Meetings: Allocating Funds & Leveraging Opportunities***

<b>Table 7. Combined Meetings: Allocating Funds &amp; Leveraging Opportunities</b>				
	<b>Priority</b>	<b>Investment</b>		<b>Leveraging Opportunities</b>
		<b>State Agency</b>	<b>Stakeholder</b>	
1	Maintain and Repair State Agriculture Irrigation Systems	\$16M	\$15M combined w/ #6	US Army Corps, USDA NRCS, USDI, Bureau of Rec, FEMA, HAHASDA, Landowners, Nonprofits, KS and Big Land Owners, Private Sector Investment, Ag /

				Ranchers, Farmers, Processors, and Investors
2	Develop an Organizational Structure to Organize and Support Food Self-Sufficiency Activities	\$12M	\$5M	Increase Barrel Tax from \$1.05p/barrel to \$2.10 p/barrel: Increase Barrel Tax Allocation, Federal Govt, RDA Matching (Low Income Infrastructure), Peter Adler (Accord Group)
3	Provide Market Information and Statistics to Support Production, Marketing, Policy, Planning and Research	\$12M	\$10M	HCF/Ulupono Support Data Clarity and Tracking, Ag Sector Delivered Data, Public / Private Alliance
4	Encourage Efficient Distribution Systems to Move Food to the Marketplace	\$10M	\$13M combined w/ #8	Matching Marketing Funds, Cooperate with All Sectors to Improve BMP's, New Market Tax Credits, Private Sector Investment, Private / Mainland Co-Investment Partners
5	Promote Agricultural Research and Extension Services that Anticipate Future Challenges	\$9M	\$12M combined w/ #7	USDA Pest Management (240,000 in 2012 and 2013) Federal Grants to Promote IPM, USDA/NFA, NRCS/SARE, US Dept of Labor, Local and Mainland Foundation Grants, Farm Bureau, CTAHR, DLIR, Green Jobs Initiative
6	Provide Suitable Public Lands at Reasonable Cost and with Long-Term Tenure for Commercial Agricultural Purposes	\$8M	See #1	Landowners, Nonprofits, KS and Big Land Owners, Private Sector Investment, Ag / Ranchers, Farmers, Processors, and Investors
7	Provide an Adequate Supply of Trained Labor for Agricultural Needs	\$7M	See # 5	HUD FUSE, DLIR Grant, USDA/NFA, NRCS/SARE, US Dept of Labor, Local and Mainland Foundation Grants, Farm Bureau, CTAHR, DLIR, Green Jobs Initiative
8	Increase Access to Markets by Providing Food Safety Certification Assistance	\$6M	\$13M combined w/ #4	Specialty Crop Block Grant Program, Cooperate with All Sectors to Improve BMP's, New Market Tax Credits, Private Sector Investment, Private ? Mainland Co-Investment Partners
9	Expand the Statewide Buy Local It Matters Campaign to Increase Demand for Hawaii's Locally Grown Foods	\$5M	\$1M	Specialty Crop Block Grant Program
10	Encourage Public Institutions to Buy Locally Grown Foods	\$4M	\$3M	Specialty Crop Block Grant Program, USDA
11	Continue to Provide Input into State and County Planning and Land Use Processes to Assure Sufficient Agricultural Land	\$0	\$0	Farmers
12	Provide Policy, Legislative and Advocacy Support for Agriculture	\$0	\$0	Need Discussion Between Agricultural and Conservation Groups

## **Increased Food Security and Food Self-Sufficiency Strategy State Agency Meeting**

June 13, 2012, 9:00 a.m. – Noon  
State Department of Agriculture, Conference Room

### **What's Missing/ General Comments**

Pest management is missing.

Transportation is an issue relating to food quality. It's difficult to get food between islands without compromising/losing quality.

Aquaculture is missing. Likely to be covered as part of another initiative.

Impacts of climate change and how it will likely effect food supply in the future.

While it's important to support current structures and systems, this strategy needs to take a 21<sup>st</sup> Century perspective (not just replicate what was in place in the past) and needs to factor in 21<sup>st</sup> Century issues like energy and agriculture (as we know it today and for the future). Does this strategy promote and push innovation, or is it more maintaining the status quo?

What is the focus of this strategy? To focus on individual sustainability (growing food in our yards) or large-scale agriculture. All levels / multiple levels is the solution (over a single path).

The number of new farmers is an opportunity. Need to find a way to support and leverage them as a resource. Need to make it easy for them to do business.

Do we need to make clear crop versus food?

Make clear in the strategy the value and importance of supporting alternative models of sustainability.

Page 9 should read: 'Food produced AND consumed'

The strategy could benefit from a clear problem statement upfront, that details what the problem is that we are attempting to solve. Also need to make clear who this strategy is targeting.

Where is GIS component?

Do we know what we are eating? (The supply we need to produce to meet our needs?)

We have the opportunity to change market demand. For example, we could replace our carbohydrate (rice) consumption with breadfruit (and other local foods).

Are there regulatory demands/constraints on certain crops? Hawaii grows minor crops. What about pesticides? How do we address that?

Strategy needs to be actionable.

Dynamics in Hawaii are different. State Agencies' responsibilities are often unclear. We need to be a united front. We need to create a strategy that is feasible for agencies to accomplish. If agencies work together the program is more likely to be supported.

### **POLICY #1: Promote Agricultural Research & Extension Services**

More research needed on cultivator development. There is a demand within the visitor industry (for guava and passion fruit, for example) that we could address. We need to be able to communicate clearly what we are producing and growing to various markets.

More research on pest management needed. Current focus is on exports. Pest management develops strategies to get products to market. Research is broad (water quality, soil...) and bi controls. Get research into the hands of producers to support their work. *[CTAHR offered to help flesh out this element of the strategy and will offer both a broad perspective and some detail/depth.]*

Public needs to be educated on UH CTAHR's good work.

Identify success stories. For example, partnership/collaboration between ARS, CTAHR and DOE

The strategy needs to move from research to implementation.

Tell the whole story of agriculture – from production to post harvest to marketing.

Conduct a literature search on what is and has been done; identify gaps. This will help identify funding.

Need solid analyses of stakeholder needs; be as inclusive as possible.

Get public and policy makers involved and engaged, especially in crop production and agriculture, as a whole. Use what's going on at the Waimanalo Urban Garden Center as an agriculture showcase and outreach tool.

What are the goals we are targeting (the metrics/measurement)? There is a lot of data already available. The amount spent on DOE's food budget, for example. Need small, manageable numbers to work with.

Do we have a good set of indicators (for fruit, vegetables, seafood, proteins) that paints a reliable picture of agriculture?

Concern that the strategy looks to large, institutional partners, like DOE to solve a big part of the problem, without taking into consideration what institutions must grapple with. Questions DOE asks is there enough supply, is it reliable; is the food safe; how much time is needed to prepare foods (on-site), what are the costs, etc.

How can the system be organized to address some of the issue that DOE raised. For example, what can be done to ensure and adequate supply of a specific food item? More cooperatives. Everyone wins. More farmers are ensured business and the DOE can count on a steady supply.

Having a single point person whose job is to connect farmers would be useful. It won't happen without steady support and guidance.

Data gaps. The state has not reported diversified agriculture data for many years (because USDA doesn't require it).

The predominance of 5-acre farm lots makes it hard to produce the amount of food needed to meet demand (unless coops encouraged).

Consider reallocation of some state land for ag use.

### **POLICY #2: Expand Statewide BUY LOCAL IT MATTERS campaign**

Do we want to expand fresh food objective to include processed (canned, pickled, jar and dried) foods? If it is expanded it has more power and reach.

Does this strategy also want to include food for export, not just consumption in state?

How do we help farmers make sales and be successful as a business?

Need a better definition of "local" food. Should mean Hawaii-local, not local somewhere else. Consider changing the term to Hawaii grown (produced or products). Need to be standardized.

Consumers need to be educated on the terms so they know what to look for and buy and don't get confused by other labeling.

Labeling that works for Hawaii may conflict with Federal requirements. And counties want their own seal programs.

DOA offers a “seal of quality” to indicate local-grown, but stores don’t want to use it. Stores want something more standardized. Cost is an issue. Within the state the ‘seal of quality’ is not promoted well. The seal needs to be reassessed by the state. It needs to work for all sectors and target markets.

Change language to: Refine the Statewide BUY LOCAL IT MATTERS campaign and make clear who is being targeted in this effort – consumers, farmers, retailers, export, etc.

Look at exportable products and help minimize price wars.

The addition of a “sales piece” intended to help farmers.

A blend of call-to-action and branding campaigns is needed.

Where’s the advertising component (beyond marketing and branding)?

**POLICY #3: Provide suitable public land for commercial agricultural purposes (reasonable cost & long-term tenure)**

More info is necessary; does not include all available lands, specifically, ADC lands and DHHL lands.

Refocus the state’s philosophy from getting lease rents to getting land up and running. The benefit to the state of making agriculture more successful and possible far exceeds the possible revenue gained from lease rent. (Adopt the DOA’s approach of being an advocate and looking for the best and highest use of land).

Need to bring DHHL to the table. If you change the lease rent approach, there will be impact on DHHL. Engage them early to help solve the problem. There needs to be greater understanding and connection with DHHL. They can help add a sustenance perspective to the strategy, which is missing.

DHHL has 200 acre limit for land that can be designated for ag. Can that be increased?

Strategy does not make clear the link between water and land. The water system is in disrepair. Do a better job of linking land use to demand.

**POLICY #4: Continue to provide input into State & County planning and land use processes to assure sufficient agricultural lands**

Add water issue and reference to Important Agricultural Lands (can be designated as such through certain laws). Counties designate & identify these lands on their own.

Include a reference to the Important Agricultural Lands (IAL) law. Will result in more support to counties and for smaller land owners.

Can food security be framed as a health issue, thereby making it possible to engage the Department of Health? Highlight the nutritional value and eating local foods. This can be a marketing message.

Do we have enough capacity to enforce appropriate land use (of private lands)? Every year changes are proposed; this is a reoccurring topic.

Public pressure is needed/helps to get lands protected.

Permissible uses should be broadened so people are encouraged to use land in agricultural ways.

Is the state or are counties able to predict/anticipate ag land use needs? If so, this would help drive and inform planning efforts. Kauai has a good model for planning that they use, looking to their future needs.

**POLICY #5: Maintain and repair state agriculture irrigation systems**

This strategy does not tell the entire “water story”. Water use includes access, availability, efficient use, irrigation systems, dams, reservoirs, new and old systems, state and private access, etc.

Strategy should take into account the development of new systems versus simple repairing and maintaining existing systems.

More work with private land owners on water use (efficiency) would be useful.

Consider linking this strategy to the state’s watershed system (and plans).

The way this policy statement is written, is as an action item. Suggest rewriting or placing this item as an action within the strategy.

One element of this strategy might include helping farmers to pay for dam repair (39A – new law??)

Study is being done by state on recycling waste water (already done in Army). Matter of planning; must be right crop.

More can be done (as demonstrated by the Army) to reuse waste water / reclaimed water on ag land.

The Farm Bureau may have a different position on efficiency; that unless restrictions are developed in collaboration with farmers, they may harm farmers. Not all crops required the same amount of water – some more, some less. To require all farmers to use a set level won't work.

Many farmers are already using efficiency systems. Need to see them as a willing partner, engage them and find ways to help new farmers and those changing crops.

***Allocating Funds & Leveraging Opportunities***

<b>Table 8. Allocating Funds &amp; Leveraging Opportunities – June 13, 2012</b>		
<b>Priority</b>	<b>Investment</b>	<b>Leveraging Opportunities</b>
Maintain and Repair State Agriculture Irrigation Systems	\$16M	US Army Corps, USDA NRCS, USDI, Bureau of Rec, FEMA, NAHASDA
Develop an Organizational Structure to Organize and Support Food Self-Sufficiency Activities	\$12M	Increase Barrel Tax from \$1.05 p/barrel to \$2.10 p/barrel; Increase Barrel Tax Allocation
Provide Market Information and Statistics to Support Production, Marketing, Policy, Planning and Research	\$12M	
Encourage Efficient Distribution Systems to Move Food to the Marketplace	\$10M	Matching Marketing Funds
Promote Agricultural Research and Extension Services that Anticipate Future Challenges	\$9M	USDA Pest Management (240,000 in 2012 and 2013) Federal Grants to Promote IPM
Provide Suitable Public Lands at Reasonable Cost and with Long-Term Tenure for Commercial Agricultural Purposes	\$8M	
Provide an Adequate Supply of Trained Labor for Agricultural Needs	\$7M	HUD FUSE, DLIR Grant
Increase Access to Markets by Providing Food Safety Certification Assistance	\$6M	Specialty Crop Block Grant Program
Expand the Statewide Buy Local It Matters Campaign to Increase Demand for Hawaii's Locally Grown Foods	\$5M	Specialty Crop Block Grant Program
Encourage Public Institutions to Buy Locally Grown Foods	\$4M	Specialty Crop Block Grant Program
Continue to Provide Input into State and County Planning and Land Use Processes to Assure	\$0	

Sufficient Agricultural Land		
Provide Policy, Legislative and Advocacy Support for Agriculture	\$0	

## **Increased Food Security and Food Self-Sufficiency Strategy Stakeholder Meeting**

June 27, 2012, 9 a.m. – Noon

Office of Planning Hearing Room

### **What's Missing / General Comments**

What happens once we come up with strategy; how will implementation be monitored?

The strategy needs to get granular, beyond broad suggestions, with locations, dates, outcomes, priorities, authorities and partnerships.

The draft is missing the big-picture strategy, showing linkages, sequencing and responsible entities.

Parts of this strategy appear to be independent of each other, when in fact they are connected; planning and implementation will be improved if the connections (between land and water, for example) are made clear. Introduce a “value chain” to the planning process.

The value chain, has both “universal” applicability, also has differences by region, island and type of product.

The connection between agriculture and other sectors – conservation and energy, as examples – is missing from the strategy.

To make these policies / the strategy work, we need to discuss which ones work together and which stakeholders should come together. We have to honor and recognized various constituents, along with their differing opinions, and consider how they overlap.

Create a systems map for the strategy.

Shape this strategy around strategic – “the next best” – opportunities, including regional issues/situations, a specific crop, piece of land, or “ripe” (for collaboration) partnerships to ensure success. (Instead of writing a theoretical or unachievable strategy.)

On page 27, the strategy suggests that improving market channels is the most important action/ priority for this strategy. If this is the case, it needs to be the centerpiece for the strategy; made clear; and drive all other activities.

Community outreach needs to be part of the plan. Communities are interested in understanding what state, county and private sector are doing to address these goals.

The public relies on media, who often don't report the full story. DOA is responsible for some outreach, but it should be a shared, coordinated [multi-agency/sector] effort.  
Tourism and military, invasive species, water supply and agro tourism missing.

Aquaculture and fish is missing and needs to be addressed at some point.

Hawaii does not have a cohesive platform. There are a lot of separate efforts. It is important to get all partners and agencies on the same page so we're collectively going in the same direction. (As a result, the public will be less confused.)

The strategy should make clear who its target audience – big land owners or small owners. Large buyers or individual consumers, etc.

The strategy should go beyond fruit and vegetables to include ranching, dairies, small farmers and big farmers should be addressed in this report.

The plan needs to include full range of products, not just vegetables, from dairy to fish, everything we eat. Promote an "eat what you grow" philosophy.

IAL may matter on Oahu, but less so on the Big Island, where there are fewer big land owners. Too much emphasis on IAL may, in fact, add a layer of bureaucracy for some.

Incentives for farmers, to encourage more producers, more collaboration, production of specific crops, etc., is missing. (The "promise" of being able to make a profit is incentive, as is support with branding – for some.)

Price and profit are missing from section on Major Issues/Opportunities (page 20). Greater production may result in greater profit.

Provide incentives and remove barriers to train farmers to grow on big farms in order to be economically viable. Provide training to promote large operations.

In the past, Hawaii put effort into marketing before production (land, labor, transportation, land remediation and water); the result is that we've created demand that cannot be met.

Hawaii needs to be strategic about what products we grow and target products that are an important part of our diet.

The community needs to learn what we grow, how to eat it and develop a sense of value.

There are lots of farmers, but not enough affordable/useable land. Monsanto, for all the controversy around them, was essential to remediating the land that was used in Kunia Ag Park initiative.

CTAHR can/should be more involved and integrated (in marketing, branding, labor and education).

Hawaii is not meeting the demand for locally grown food for residents and visitors. Need both small and large producers to be producing safe, certified/certifiable foods to meet the demand.

Government has a role in helping to gain access to water systems.

Move toward, support and encourage mechanical farming as a business model, so that production yields (and profits) can be increased.

Use of language (terminology, tone, level) that farmers can relate to. *Food safety* and *food sustainability* are buzz words not well understood in rural communities. *Self reliance* is a term more widely accepted and understood.

It is impractical to rely on the single small farmer; need to support the creation and maintenance of cooperative/collaborative arrangements in order to meet the market demands.

Big Island water situation is more complex than the State's irrigation system.

Measures to evaluate the big picture (strategy) are needed.

What does success look like? How and what are we measuring? What is our baseline (where are we starting)?

Need a dashboard or tool to measure production.

Jeff Melrose's Big Island ag land report is important and should be done on all islands to map what is being done and where.

How good is our data? Is the information out there true? What information is useful? What should we be tracking? Identify who is using the data. What are the producers questions How do we answer? What are the policymakers' questions and how do we answer.

Data, itself, is not the single biggest issue, but it underpins everything we are talking about.

Farmers can help with data collection; don't have to rely solely on government agencies.

Part of the Kunia Ag Park partnership requires farmers report.

Public private partnerships and collaboration are critical for advocating, implementation, and action.

California found a way to get the state DOA and private sector to work together, resulting in a multiplication of government money. We need to consider ways to maximize and bring in new pools of money.

Farm Bureau, Department of Health and CTAHR have adapted a philosophy that a multitude of practices are acceptable. However, there are groups that are spreading a different/counter message. Need better, coordinated educational effort to promote accurate information and to counter false or incorrect information.

Social media can be used effectively if properly applied and farmers and agencies know how to use it.

Policy descriptions broadly are good but island-by-island presentation is better/best. For example, in general, transportation/distribution is important statewide, however, it's more critical on the neighbor islands, therefore the strategies may vary from island to island.

Avoid referring to programs; instead, focus ongoing initiatives.

This plan should help promote and support collaboration.

Government systems, which tend to work in silos are a barrier to success. The way government operates needs to be modernized; throw out what doesn't work; and embrace innovative approaches.

Need more information sharing between government and the private sector.

Cooperatives:

- Hawaii has had difficulty creating effective, lasting cooperatives. Need to find successful models and share the potential with farmers.
- Coops have worked with single commodity products, such as eggs, but have not been successful with diversified ag.
- Collaborative conversations are not happening. Cooperatives are one method to accomplish collaboration. How do you create policies to create cooperation? Coordinating entrepreneurs and agencies and working across silos.
- One way to incentivize farmers in a coop setting is to pay the grower right away (vs standard 30- or 45-day net). Another way is to make it easy and worthwhile to sell their products.
- Need to minimize the chance/risk of the public being able to go directly to the grower for a better price than the distributor, who promotes coop buying at a higher than typical rate.
- Promote collaboration (not cooperative). Create a less formal/structure system; make it more accessible and friendly, not just farmers and government.
- Need a "champion" whose function is to work with farmers to promote collaboration and partnership. A "benevolent entrepreneur" or "coordinating entrepreneur" was mentioned.

## **POLICY # 8: Provide an Adequate Supply of Trained Labor for Agricultural Needs**

Next generation farmers, who will ultimately be the next leaders, are missing from the “labor” element of the strategy.

Consider farmers’ language challenges; add immigrant language component to all material/efforts.

In order to reach immigrant farmers, information and transactions need to be translated into a number of languages, including Laotian and Thai. Immigrant-led agriculture is significant and needs to be considered in the strategy.

Focus on a coaching program is right on the money. But if all you do is coach for food safety and not skills, business, etc., then we are only addressing one part of the issue. Coaching needs to be integrated with capacity development, management practices and stewardship.

Expand policy to include *leadership development* and *capacity building*:

- Incorporate business skills training and teaching how farmers can become viable
  - UH Hilo has a good program where students get access to land for post-graduate projects. We must these strategically about where existing programs can be brought together and scaled up.
- Practical training for new farmers should be included, including machinery-farming, planning, seasonal planting/growing, land stewardship, best land use management practices
- Change how farmers are engaged; we currently expect them to come to the agency; instead, agencies should go to the farmer(s) to train, education and build relationships
- Promote and support mentoring and farmer-to-farmer learning. (Example: Potato growers brought in someone from California to share best practices.)
- Support (train and educate) farmers to help them hone their entrepreneurial and cooperative skills (new technologies, best practices, data collection and pilot projects).

Make mentoring easier. Remove the funding mechanism from UH structure to non-government entity. The process for accessing government funds is too daunting for the average farmer.

Create more mentoring programs to help bring new farmers into the industry; help them understand, early on, food safety issues.

Partner with Department of Labor and Community Colleges.

Need a “champion” whose function is to work with farmers to promote collaboration and partnership.

**PRIORITIES: Increase Access to Markets by Providing Food Safety Certification Assistance, Food Safety, Encourage Efficient Distribution Systems to Move Food to the Marketplace, (3 and 7)**

Note: There was both agreement and disagreement about the value of clustering linked priorities. When priorities are clearly connected, perhaps even sequentially, then it makes sense. However, not all actions within a priority are linked. Terms used, when priorities and actions are interconnected, “value chain”. When actions are linked, there may be greater opportunity for funding and actionable items will be better coordinated.

Food safety, distribution and labor (above) are closely interconnected. If you are going to make something part of the distribution chain, then you need to invest in helping/assisting farmers meet the demands.

We need to help farmers understand and accept that food safety is here to stay; it's being mandated by buyers.

#### Food Safety

- Food safety is centerpiece to all of these issues and yet farmers do not believe it's going to happen.
- We need to make sure that every farm meets the same standards.
- Farmers do not yet appreciate the impact. Convey, in an unthreatening way, that food safety requirements are customer-driven.
- Farm Bureau represents only 60 (of approximately 800) farmers. How to reach the others?
- Farmers trust other farmers, the Farm Bureau and the University (in that order).
- Extension agents could work, but instead of food safety we need to train farmers to think about good agriculture practices. Extension agents work with them now. There are trust issues between farmers and coaches.
- Push-back comes from farmers and makes coaching difficult.
- Misinformation or misreading of protocols has turned off farmers.
- The audit, strictly interpreted, is not practical. The audit gives standards and measurements that are impossible for small farmers to work with. Coaches should encourage practices to grow practically and responsibly. The emphasis should not just be on passing an audit.
- Instead of enforcing and focusing on a 4-hour audit, focus on good food safety practices.
- Provide continual training, visits and support.
- Certification as a focus shifts drives growers to sell away from markets or traditional distributors.
- Federal regulations do not fit Hawaii. We need to change what the regulators do and how they measure to ways that are suitable and appropriate for Hawaii.
- Regulations need to deal with the distributors and sellers not just on farmers.
- Create a task force to consider and recommend regulation and standards that addresses all concerns, but are appropriate and practical for Hawaii farmers.

Distribution

- Cost of transporting locally-grown foods make them non-competitive. Partnerships with shippers, airlines, etc. can help bring costs down, but only with economies of scale. A business model to be developed that includes partnerships with growers to develop economies of scale. (More farmers shipping could result in reduced or negotiated shipping rates for the group.)
- Transportation is critical for neighbor island farmers.
- Why aren't the transportation stakeholders – Young Brothers and Aloha Air – at the table?

**Allocating Funds & Leveraging Opportunities**

<b>Table 9. Allocating Funds &amp; Leveraging Opportunities – June 27, 2012</b>		
<b>Priority</b>	<b>Investment</b>	<b>Leveraging Opportunities</b>
Maintain and Repair State Agriculture Irrigation Systems + Provide Suitable Public Lands at Reasonable Cost and with Long-Term Tenure for Commercial Agricultural Purposes	\$15M	Landowners, Nonprofits, KS and Big Land Owners, Private Sector Investment, Ag / Ranchers, Farmers, Processors, Investor(s)
Develop an Organizational Structure to Organize and Support Food Self-Sufficiency Activities	\$5M	Federal Govt, RDA Matching (Low Income, Infrastructure), Peter Adler (Accord Group)
Provide Market Information and Statistics to Support Production, Marketing, Policy, Planning and Research	\$10M	HCF / Ulupono Support Data Clarity and Tracking, Ag Sector Delivered Data, Public / Private Alliance
Provide an Adequate Supply of Trained Labor for Agricultural Needs + Promote Agricultural Research and Extension Services that Anticipate Future Challenges	\$12M	USDA / NFA, NRCS / SARE, US Dept of Labor, Local and Mainland Foundation Grants, Farm Bureau, CTAHR, DLIR, Green Jobs Initiative
Increase Access to Markets by Providing Food Safety Certification Assistance + Encourage Efficient Distribution Systems to Move Food to the Marketplace	\$13M	Cooperate with All Sectors to Improve BMPs, New Market Tax Credits, Private Sector Investment, Private / Mainland Co-Investment Partners
Expand the Statewide Buy Local It Matters Campaign to Increase Demand for Hawaii's Locally Grown Foods	\$1M	

Encourage Public Institutions to Buy Locally Grown Foods	\$3M	USDA
Continue to Provide Input into State and County Planning and Land Use Processes to Assure Sufficient Agricultural Land	\$0M	Farmers
Provide Policy, Legislative and Advocacy Support for Agriculture	\$0M	Need Discussion Between Agricultural and Conservation Groups



## **Appendix E:**

**Summary of “Complete Eats”  
Legislation: the Farm Bill and Food  
Systems Planning” by Christine Fry  
and Heather Wooten in Planning and  
Environmental Law, April 2012**



Food is a vital element to a healthy and sustainable place. The farm bill is the most influential piece of federal legislation affecting food and agriculture in the United States. The farm bill is enacted every five to seven years to establish America’s food and farm policy. The recently proposed 2012 Farm Bill provides \$600 billion in spending over 10 years. As food and agriculture become a more important role in local and regional policy, planners are becoming more involved in the resurgence of food in land use and economic and community development. Information from the article *‘Complete Eats’ Legislation: The Farm Bill and Food Systems Planning* by Fry and Wooten is discussed to provide an overview of the farm bill and the role of planner. Four core food systems are discussed as they relate to the farm bill and planning: food access, farming viability, economic development, and support for local food system plans and policy development.

Planners can work with local or state human service agencies to promote economic development by increasing enrolment in programs that assist families with better food access. The largest nutrition program in the United States, receiving 64 percent of farm bill funding and serving 40 million people in 2010, is the Supplemental Nutrition Assistance Program (SNAP). The SNAP program provides healthy food to low-income families and the SNAP program has economic benefits as well. Nine dollars of economic activity for the community is generated for every \$5 of SNAP funding. In addition, planners can evaluate how effective local retailers are at providing healthy food to SNAP participants and how accessible these retailers are to low-income participants.

Planners can also promote farming viability by increasing the numbers of farmers, improving access to markets for new agricultural products and creating new food related markets, and adopting land use preservation policies. The farm bill includes federal grants to promote economic development by assisting rural businesses with operating expenses. The farm bill promotes hubs that link local producers and consumers to promote rural economic development.

In addition, the farm bill offers planners support with plans and community engagement related to local food system plans and policy development. The Food Environment Atlas, an interactive online mapping tool, may be used by planners to assess support for local food system plans and policy development. The Community Food Projects Competitive Grants Program also funds a variety of food system assessments, plans, programs, and start-up funding for food policy councils.

The table below illustrates farm bill funding as it relates to food systems and agricultural programs.

<b>Table 10. Farm Bill Funding Programs – Food Systems</b>		
<i>Access to affordable, healthy food</i>		
<b>Program</b>	<b>Description</b>	<b>Potential Funding Source for:</b>
Supplemental Nutrition Assistance Program (SNAP)	Provides money to low-income people to purchase food. Served 40 million people in 2010.	Building demand for healthy food in low-income communities.
Healthy Urban Food Enterprise Development (HUFED)	Provides small and large grants and technical assistance for food business development with a focus on getting more healthy food— including locally produced food— into communities with limited access.	Corner stores, grocery stores, food processing, food distribution.
Farmers Market Promotion Program	Offers grants to help improve and expand domestic farmers markets, roadside stands, community supported agriculture	Starting up, expanding, or marketing farmers markets and other direct-to consumer sales.

	programs, and other direct producer-to-consumer market opportunities.	
<i>Viability of farming in rural and urban areas</i>		
Beginning Farmers and Ranchers Development Program	Funds training focused on these key areas: farm and ranch management strategies; business development; marketing; land acquisition; and sustainability practices. Can be used for both rural and urban farming activities.	Farmers markets, food processing, food distribution, community gardens.
Specialty Crop Block Grant	Funds a wide range of projects that promote fruits and vegetables (specialty crops) grown in the United States, including farmers' market incentive programs, distribution infrastructure, and production research.	Farmers markets, food processing, food distribution.
<i>Local economic development through food-related businesses</i>		
Rural Development Value-Added Agriculture Producer Grants	Funds business planning or development for new agricultural product processing businesses.	Corner stores, grocery stores, farmers markets, food processing, food distribution.
Rural Business and Industry Loan Program	Guarantees loans for business development and improvement, including business acquisitions to save or create jobs, modernization, and purchase of equipment or land. The program has a 5 percent set aside for projects that facilitate the growth of local and regional food markets.	Corner stores, grocery stores, food processing, food distribution.
<i>Food system planning and policy support</i>		
Food Desert Study	Congress funded a one-time study of areas in the United States with limited access to healthy food.	N/A
Community Food Projects Competitive Grants Program	Offers grants and technical assistance to community organizations to support entrepreneurial projects, develop innovative links between the for-profit and nonprofit food sectors, and encourage long-term planning activities and interagency approaches.	Corner stores, grocery stores, farmers markets, food processing, food distribution, food policy councils.
<i>Note: Planners who are interested in seeking funding from these programs can learn more from PHLP's Green for Greens: Finding Public Funding for Healthy Food Retail, available at: <a href="http://www.nplanonline.org/childhood-obesity/products/green-for-greens">http://www.nplanonline.org/childhood-obesity/products/green-for-greens</a>.</i>		

Planners wanting to become more involved in the farm bill can research the farm bill provisions and how they affect the local community, sign-up for email updates regarding federal policies from nation groups interested in the farm bill, host or participate in listening sessions, and dine with food policy advocates in the local community.

**Appendix F:**  
**The 2008 Farm Bill**



The United States Department of Agriculture provides a side-by-side comparison of the new provisions in the 2008 Farm Bill with previous legislation. Listed below are the provisions important to the strategic plan as they appear in the various Titles of the 2008 Farm Bill.

**2008 Farm Bill Side-By-Side**

**Title IV: Nutrition**

**Purchase of Fresh Fruits and Vegetables for Distribution**

Previous Legislation	2008 Farm Bill
<p>Required Secretary to use a minimum of \$200 million/year through FY 2007 to purchase additional fruits, vegetables, and other specialty food crops. A minimum of \$50 million/year was to be used exclusively for purchases of fresh fruits and vegetables to be distributed to schools participating in school lunch and other child nutrition programs.</p> <p>Authorized Department of Defense (DoD) to act as agency for procurement of fresh fruits and vegetables through its DoD Fresh Program.</p>	<p>Requires that Secretary procure fruits, vegetables, and nuts (in frozen, canned, dried, or fresh form) for use in domestic nutrition assistance programs using Section 32 funds in following amounts:</p> <ul style="list-style-type: none"> <li>• \$190 million in FY 2008</li> <li>• \$193 million FY 2009</li> <li>• \$199 million FY 2010</li> <li>• \$203 million FY 2011</li> <li>• \$206 million in FY 2012 and thereafter</li> </ul> <p>Retains minimum of \$50 million annually for purchase of fresh fruits and vegetables for use in schools and service institutions participating in programs under National School Lunch Act (NSLA). Allows that these amounts may continue to be spent through DoD Fresh Program.</p>

## Fresh Fruit and Vegetable Program

Previous Legislation	2008 Farm Bill
<p>Amended NSLA to require pilot programs to make free fresh (or dried) fruits and vegetables available in a limited number of elementary and secondary schools in 4 States and 1 Indian reservation.</p> <p>Child Nutrition and WIC Reauthorization Act of 2004 made program permanent and included additional States and Indian reservations.</p>	<p>Expands mandatory funding for Fresh Fruit and Vegetable Program with additional \$40 million in FY 2008, \$65 million in FY 2009, \$101 million in FY 2010, and \$150 million in FY 2011. In July 2012 and each July thereafter, funding is to be adjusted for cost-of-living increases. All funds remain available until expended.</p> <p>Allocates funding among States under a formula distributing roughly half of funds equally among States and rest based on State population.</p> <p>Allows that participating elementary schools are to be selected by States with priority generally given to schools with highest proportion of children eligible for free or reduced-price school meals. Requires State agencies to initiate special outreach to such children.</p> <p>Allows that per student grants are to be determined by States at levels no less than \$50, or more than \$75, annually.</p> <p>Provides mandatory funding of \$3 million from FY 2008 funds and made available until end of FY 2010 to determine whether children participating in program increase their consumption of fruits and vegetables or make other dietary changes, such as decreased consumption of less nutritious food.</p>

## Farmers' Market and Community Food Promotion

Previous Legislation	2008 Farm Bill
<p>Authorized annual funds of up to \$5 million for Community Food Competitive Grants for FY 2002-07 and expanded definition for qualifying projects.</p>	<p>Continues authorization for annual funding of \$5 million for Community Food Competitive Grants through FY 2012.</p>

## Locally Produced Foods

2002-07 Legislation	2008 Farm Bill
Directed Secretary to encourage schools participating in National School Lunch and School Breakfast Programs to purchase locally produced foods. Authorized annual funding of \$400,000 for FY 2003-07 to provide startup grants for up to 200 institutions.	Directs Secretary to encourage institutions, such as schools, that receive funds from child nutrition programs to purchase unprocessed agricultural products, both locally grown and locally raised, to maximum extent practicable and appropriate. Allows use of geographic preference in procurement in all programs funded under NSLA, Child Nutrition Act, and DoD Fresh Program.

<http://transcoder.usablenet.com/tt/http://www.ers.usda.gov/FarmBill/2008/>

## Title V: Credit

**Farm Operating Loans** provide [direct](#) or [guaranteed](#) loans for operating expenses of family-sized farms or ranches for operators unable to obtain sufficient credit elsewhere on reasonable terms.

### Farming Experience (Direct Farm Operating Loans)

Previous Legislation	2008 Farm Bill
Required borrowers to participate in operation of farm or ranch for at least 3 years to be eligible for direct farm operating loan.	Provides that any farm experience, no matter when it occurred, must be considered in determining whether applicant meets 3-year experience requirement.

### Limitations on Amount of Operating Loans

Previous Legislation	2008 Farm Bill
Set direct Loan borrowing limit at \$200,000.	Increases borrowing limit to \$300,000

### Beginning Farmer or Rancher and Socially Disadvantaged Farmer or Rancher Contract Land Sales Program

Previous Legislation	2008 Farm Bill
Established pilot program to guarantee up to	Expands program to include <a href="#">socially</a>

Previous Legislation	2008 Farm Bill
<p>5 loans per State made by private seller of farm or ranch to <a href="#">qualified beginning farmer or rancher</a> on contract land sale basis, if loan met applicable underwriting criteria and commercial lending institution agreed to serve as escrow agent.</p>	<p><a href="#">disadvantaged farmers or ranchers</a>; makes it permanent and nationwide; and sets minimum down payment for participants of 5%, maximum purchase price of \$500,000, and loan period of 10 years. Offers sellers choice of guarantee options.</p>

<http://transcoder.usablenet.com/tt/www.ers.usda.gov/FarmBill/2008/Titles/TitleVCredit.htm>

## Title VI: Rural Development

### Promoting Value-Added Agriculture

#### Business and Industry Program Changes

Previous Legislation	2008 Farm Bill
<p>Amended rules for Rural Business and Industry Loan Guarantee program and Rural Business Enterprise Grants to allow greater program participation for producers, firms, and cooperatives that produce value-added agricultural goods.</p> <p>Broadened eligibility to include more types of renewable-energy systems, such as wind energy and anaerobic digesters.</p>	<p>Gives priority to loans and loan guarantees for locally or regionally produced food projects with components benefiting underserved communities. At least 5% of program funds must be reserved until April 1 each year for projects promoting locally or regionally produced agricultural products.</p>

#### Value-Added Agricultural Product Marketing Development Grants

Previous Legislation	2008 Farm Bill
<p>Authorized Value-Added Agricultural Product Marketing Development Grants, with expanded eligibility.</p> <p>Funded new Agriculture Innovation Center Demonstration Program to provide technical assistance, business and marketing planning, and other nonfinancial assistance to value-added businesses.</p>	<p>Mandatory funding of \$15 million available on Oct 1, 2008 from Commodity Credit Corporation (CCC) for use until expended. Establishes priority for <a href="#">socially disadvantaged and new farmers</a>. 10% of funding shall be reserved for projects benefiting beginning or socially disadvantaged farmers and ranchers, and 10% shall be reserved for projects developing mid-tier value chains.</p> <p>Authorizes appropriations for Agriculture Innovation Center Demonstration Program.</p>

<http://transcoder.usablenet.com/tt/www.ers.usda.gov/FarmBill/2008/Titles/TitleVIRural.htm>

## Title X: Horticulture and Organic Agriculture

### Food Safety Education Initiative

Previous Legislation	2008 Farm Bill
No similar provision.	Establishes program to educate persons involved in fresh produce industry, and public, about sanitary handling practices and ways to reduce pathogens in fresh produce. Authorizes appropriations of \$1 million annually during FY 2008-12.

<http://transcoder.usablenet.com/tt/www.ers.usda.gov/FarmBill/2008/Titles/TitleXHorticulture.htm#specialitycrops>

## Title XI: Livestock

### Country-of-Origin Labeling

Previous Legislation	2008 Farm Bill
<p>Required retailers to inform consumers of country of origin of covered commodities at final point of sale. Foodservice establishments were exempted.</p> <p>Directed Secretary to issue guidelines for voluntary labeling by Sept 30, 2002, and to promulgate requirements for mandatory labeling no later than Sept 30, 2004. Public Laws 108-199 and 109-97 delayed the implementation of policy for all covered commodities except fish and shellfish until Sept 30, 2008. The (interim final) rule for fish and shellfish became effective April 4, 2005.</p>	No change

### Food Safety Improvements

Previous Legislation	2008 Farm Bill
No similar provision.	<p>Amends FMIA and PPIA to require meat and poultry plants to:</p> <ul style="list-style-type: none"> <li>immediately notify Secretary if an establishment believes or has reason to believe that an adulterated or misbranded meat/poultry or meat/poultry food product has entered commerce</li> </ul>

Previous Legislation	2008 Farm Bill
	<ul style="list-style-type: none"> <li>• prepare and maintain, in writing, plan for recall of all meat/poultry or meat/poultry food products produced and shipped by establishment</li> <li>• document each reassessment of plant's hazard analysis and critical-control-point plans</li> <li>• upon request, make their recall plans and reassessment documents available to USDA inspectors for review</li> </ul>

### Content and Placement of Labels

Previous Legislation	2008 Farm Bill
Required that country-of-origin information be provided to consumers by label, stamp, mark, placard, or other clear and visible sign on commodity or on package, display, holding unit, or bin containing the commodity.	No change.

### Compliance and Verification

Previous Legislation	2008 Farm Bill
<p>Provided for compliance audit trails and required participants in marketing chain to supply information to retailers. Retailers may have been fined up to \$10,000 for willfully failing to comply.</p>	<p>Secretary may conduct an audit of any person that prepares, stores, handles, or distributes a covered commodity for retail sale to verify compliance. Secretary may not require records of country of origin other than those maintained in normal course of business.</p> <p>Retailer or person supplying retailer has 30 days to comply. If retailer/person willfully fails to comply, Secretary may fine retailer/person \$1,000 for each violation.</p>

<http://transcoder.usablenet.com/tt/www.ers.usda.gov/FarmBill/2008/Titles/TitleXILivestock.htm#COOL>

## **Appendix G:**

# **Key Facts & Frequently Asked Questions About the 2010 Food Safety Modernization Act**



The food safety law passed by Congress on December 21, 2010 aims to ensure the U.S. food supply is safe by shifting the focus of federal regulators from responding to contamination to preventing it. FDA Commissioner Margaret A. Hamburg, M.D. issued a [written statement](#) shortly after passage. Key facts about this legislation are presented below.

### **The FDA Food Safety Modernization Act (FSMA): Key Facts**

The burden of foodborne illness is considerable. Every year, 1 out of 6 people in the United States—48 million people--suffers from foodborne illness, more than a hundred thousand are hospitalized, and thousands die.

Below are some of the important food safety enhancements included in the legislation.

#### **Preventive controls**

For the first time, FDA has a legislative mandate to require comprehensive, prevention-based controls across the food supply.

- The legislation transforms FDA's approach to food safety from a system that far too often responds to outbreaks rather than prevents them. It does so by requiring food facilities to evaluate the hazards in their operations, implement and monitor effective measures to prevent contamination, and have a plan in place to take any corrective actions that are necessary.
- It also requires FDA to establish science-based standards for the safe production and harvesting of fruits and vegetables to minimize the risk of serious illnesses or death.
- This new ability to hold food companies accountable for preventing contamination is a significant milestone in the efforts to modernize the food safety system.

[www.fda.gov/fsma](http://www.fda.gov/fsma)

## **Inspection and Compliance**

The legislation recognizes that inspection is an important means of holding industry accountable for their responsibility to produce safe product. FDA will meet this expectation by:

- Applying its inspection resources in a risk-based manner
- Innovating in its inspection approaches to be the most efficient and effective with existing resources

## **Imported Food Safety**

The legislation provides significant enhancements to FDA's ability to achieve greater oversight of the millions of food products coming into the United States from other countries each year. An estimated 15 percent of the U.S. food supply is imported, including 60 percent of fresh fruits and vegetables and 80 percent of seafood.

More specifically, relative to import food safety, the legislation:

- requires importers to perform supplier verification activities to ensure imported food is safe
- authorizes FDA to refuse admission to imported food if the foreign facility or country refuses to allow an FDA inspection
- authorizes FDA to require certification, based on risk criteria, that the imported food is in compliance with food safety requirements
- provides an incentive for importers to take additional food safety measures by directing FDA to establish a voluntary program through which imports may receive expedited review of their shipments if the importer has taken certain measures to assure the safety of the food

## **Response**

For the first time, FDA will have mandatory recall authority for all food products. While FDA expects that it will only need to invoke this authority infrequently since the food industry is largely compliant with FDA's requests for voluntary recalls, this new authority is a critical improvement in FDA's ability to protect the public health.

## **Enhanced Partnerships**

The legislation recognizes the importance of strengthening existing collaboration among all food safety agencies – Federal, state, local, territorial, tribal, and foreign – to achieve our public health goals.

It also recognizes the importance of building the capacity of state, local, territorial and tribal food safety programs. Among other provisions, it directs the Secretary to improve training of state, local, territorial and tribal food safety officials and authorizes grants for training, conducting inspections, building capacity of labs and food safety programs, and other food safety activities.

Further inquiries related to the FDA Food Safety and Modernization Act may be found at [www.fda.gov/fsma](http://www.fda.gov/fsma)

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