



# **A Strategic Direction for Agriculture for Hawai'i**

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## **An Assessment of Agriculture**

Import Commodity volumes - Include chart/graph to explain import/local production yearly ratio/trend  
Local Commodities that can be scaled to replace imports  
Commodities to be scaled for value-added products

2

## **Matching Commodity to Regions**

3

## **Pilot Regional/Area Plans – Production only, Processing only, Production and Processing**

West Kauai (Food Crops; Livestock)  
West Maui (Food Crops; Livestock)  
Central Oahu (Food Crops; Livestock)  
East Hawai'i (Ornamentals)  
Leeward Oahu (Food Crops; Livestock)  
North Shore, Oahu (Aquaculture; Swine)

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## **Potential Incentives and Programs Supporting Agriculture**

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## 1: An Assessment of Agriculture

## Assessment of Agriculture in Hawai'i

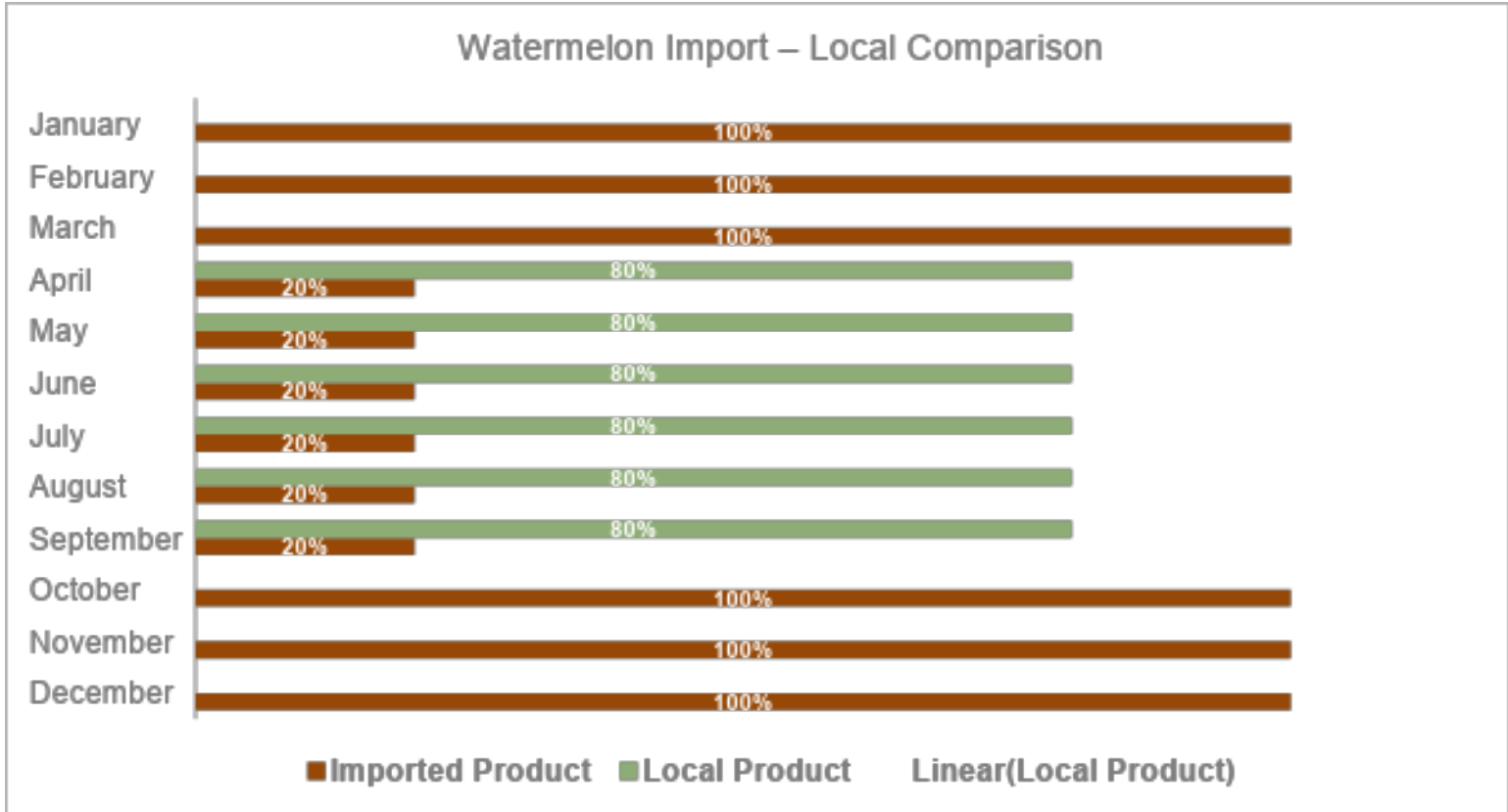
- Downsizing of sugar and pineapple in the 1990s ended plantation agriculture in Hawai'i
- Active agricultural lands decreased from 350,830 acres in 1980 to 151,830 acres in 2015
- Industry was unprepared to transition from pineapple and sugar to diversified agriculture
- Hawai'i remains largely dependent on imported foods
- Agriculture industry lacks investment capital in Hawai'i
- Local farmers lack the knowledge of matching crops to growing regions
- Hawai'i's climate does not allow farmers to grow all imported products
- Focus should be on growing products that can be grown in Hawai'i and increasing exports (i.e. value-added goods)

## Topics to Address

- Identify regions to develop economies of scale for the purposes of cost control and price competitiveness
- Identify commodities that can replace imports and commodities that will increase exports (i.e. value-added products) based on private distributors
- Match commodities with regional pilot project areas to see growth potential
- Create a comprehensive approach to address problems of housing, workforce training, and research

## 2: Matching Commodities to Regions

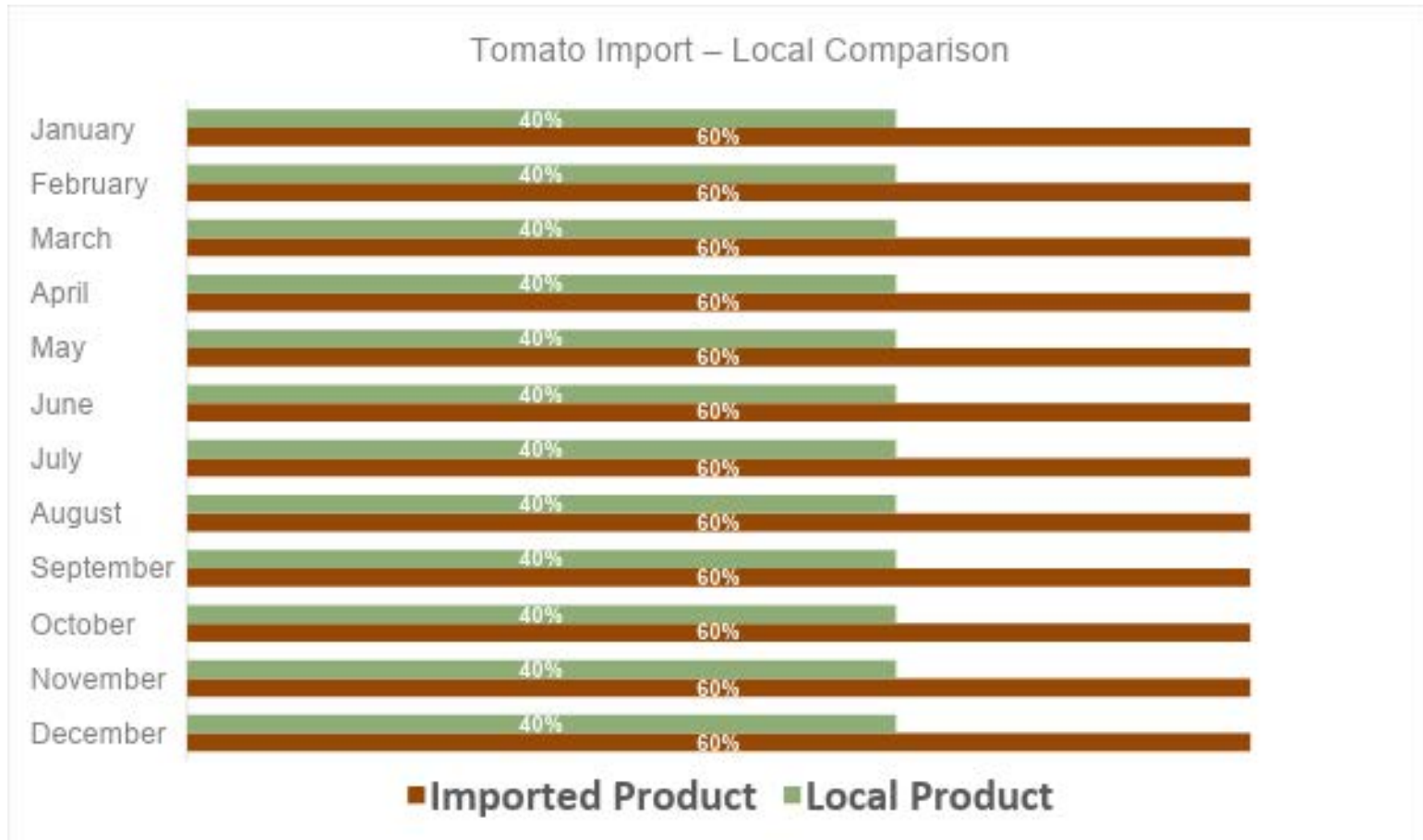
# Import Commodity Volumes



During Hawai'i's watermelon season, local growers are able to supply 80% of market demand with local watermelons.

Source: Private Distributors (2017)

## Import Commodity Volumes



Hawai'i's local growers are able to supply 40% of the tomato market demand year round.



# Scalable Local Commodities to Replace Imports

1

## Fruits

- Tropical and Exotic Fruits
- Citrus
- Melons
- Avocado
- Berries

2

## Vegetables

- Asparagus
- Leafy Greens: Spinach, Lettuce, Cabbage
- Cole Crops: Broccoli, Cauliflower, Mushrooms, Peppers, Sweet Potato, Potatoes
- Root Vegetables: Beets, Radishes, Green Turnips, Chop Suey Yams, Squashes, Taro, Onions (bulb)

3

## Aquaculture

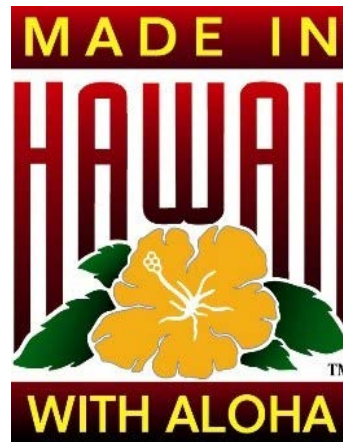
- Fish and Shrimp

4

## Livestock, Hogs, Poultry

## Scalable Local Commodities for Value-added Products

- Tomatoes
- Cucumbers
- Breadfruit
- Coffee
- Macadamia Nuts
- Lilikoi
- Cacao
- Teas and Mamaki
- Honey
- Lavender



### 3: Pilot/Regional Project Areas

Production Only, Processing Only, Production and  
Processing

## Matching Commodity to Pilot Regions

### West Kauai

Mango  
Eggs  
Livestock  
Breadfruit  
Sweet potato  
Citrus

### Central Oahu

Mango  
Eggs  
Livestock  
Breadfruit  
Sweet potato  
Citrus  
Water-melon  
Bananas  
Green Onions  
Avocado  
Livestock

### West Maui

Mango  
Coffee  
Tropical Fruits

### East Hawai'i

Anthurium  
Cacao  
Avocado  
Exotic Tropical Fruits  
Sweet Potato  
Taro  
Root Ginger  
Orchids  
Foliage  
Eggplant  
Peppers  
Jackfruit, Durian

### Leeward Oahu

Livestock  
Poultry  
Hogs  
Fruits & Vegetables

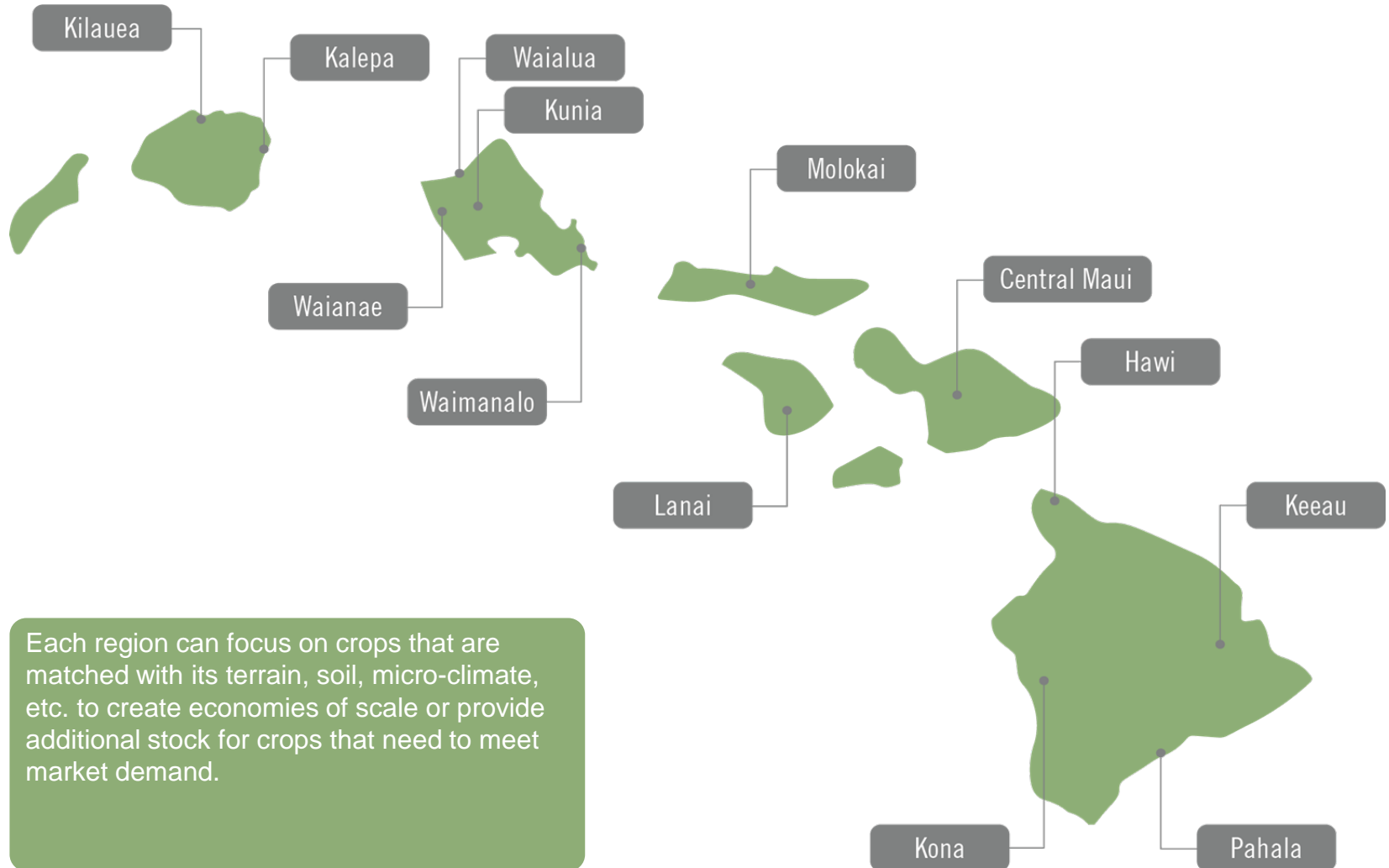
### North Shore

Freshwater Aquaculture  
Saltwater Aquaculture  
Hogs

## Pilot/Regional Project Areas

Categories	West Kauai	Central Oahu	West Maui	East Hawai'i	Leeward Oahu	North Shore
<b>Land Maps/ TMKs</b>	State	State	Private (ML&P)	Private, State, DHHL	State	State
<b>Access to markets</b>	Kauai; Transport to Oahu	Oahu	Maui; Transport to Oahu	Exports	Oahu; Transport to Neighbor Islands	Oahu
<b>Production and Processing- Packaging</b>	Production and Processing- Packaging	Production and Processing- Packaging	Production and Processing- Packaging	Production Only	Processing- Packing Only	Production and Processing- Packaging
<b>Water/Irrigation</b>	KAA	Irrigation Needed	West Maui Irrigation	Irrigation Needed	County	Freshwater Well
<b>Housing</b>	Needed	Needed	Existing	Needed	Needed	Needed
<b>Community Plans</b>	Waimea-Kekaha Regional Development Plant	Wahiawa Urban Design Guidelines	Pulelehua Subdivision	Envision Downtown Hilo	Kapolei Urban Design Plan	Haleiwa Commercial Redevelopment

## Other Potential Regions



Each region can focus on crops that are matched with its terrain, soil, micro-climate, etc. to create economies of scale or provide additional stock for crops that need to meet market demand.

## Potential Local Workforce

### Agricultural Engineers

7 job postings  
\$97,000 average  
salary

### Agricultural Equipment Operators

15 job postings  
\$47,000 average  
salary

### Agricultural and Food Science Technicians

498 job postings  
\$43,000 average  
salary

### Agricultural Inspectors

59 job postings  
\$48,000 average  
salary

### Farmers, Ranchers, Agricultural Managers

9 job postings  
\$61,000 average  
salary

### Soil and Plant Scientists

154 job postings  
\$61,000 average  
salary

## 4: Incentives and Programs

Marketing, Programs, and Acquisition



# Marketing, Programs, and Acquisitions

1

## Eat and Buy Local

- Buy Local Campaign needs to be seasonal, focused on specific commodities
- Food and Wine Festivals to feature local commodities
- State Agencies and vendors to purchase local

2

## Programs

- Shipping incentives and tax credits
- Enterprise Zone
- Foreign Trade Zone
- Tax Incentives to comply and invest in Food Safety
- Expand ag loan programs
- Provide grants for agriculture companies
- Reduce cost to hook up to infrastructure

3

## Acquisition

- Land exchange
- Purchase existing irrigation infrastructure and vacant agricultural lands
- Expand uses for barrel tax funding

## 5: Partnerships

State, County, and Private Sector



**Champion**

Workforce  
Housing

Landowner

Agriculture  
Department

County

Research and  
Technical  
Assistance

Technology

Investment

Education:  
Workforce  
Readiness

Federal  
Agencies

Nonprofit

Branding

## 6: Next Steps

## Next Steps

### Administrative Tasks

- Calculate import and export quantities, farm to develop economies of scale to justify processing and packaging, acreage for each crop to be scaled in each region and water needs to support scaling the commodity
- Partner with key state and county agencies to address housing, workforce development, R&D
- Require state agencies and concessions to procure certain percentages of food products locally
- Develop new varieties annually
- Condition leases so farmers grow crops needed in the state
- Develop agriculture into a budget priority

### Legislative Tasks

- Establish reimbursement transportation cost program under DOA

### Economic Development Tasks

- Develop regional and/or commodity champions
- Integrate rural agriculture into visitor experience
- Develop Hawai'i into a center to serve as focal point of development, exchange and sale of information and services