

EACP Committee

From: Common Ground Collective <cgcmaui@gmail.com>
Sent: Monday, June 15, 2020 11:25 AM
To: EACP Committee
Subject: CGC Presentation
Attachments: CGC EACP Presentation.pdf

Aloha EACP committee staff,

I am attaching CGC's slides for tomorrow's presentation as requested. Please let me know if you need anything else.

Mahalo,

Terese Masters
Co-Founder & Vice Chair
Common Ground Collective

Growing Maui County's Agricultural Systems



Jennifer Karaca, B.A.S., SSM
Founding Executive Director
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Food Security vs Food Self-Sufficiency?

Food self-sufficiency is defined as the proportion of domestic effective demand for a good that is met by domestic production is commonly referred to as the “self-sufficiency ratio”. (Department of Agriculture. Food Self-Sufficiency in Hawaii, A Hawai`i Department of Agriculture White Paper. December 16, 2008)

Food security is defined as when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (Food and Agriculture Organization of the United Nations.(FAO 1996, para 1)

Food Insecurity

- ▶ **Import reliance for food is upwards of 90%** (Hawai 'i's food consumption and supply sources: benchmark estimates and measurement issues." Agricultural and Food Economics 1.1.,2013)
- ▶ **12% Food Insecurity & 19.4% Child Food Insecurity** (2015 SocioNeeds Index for Maui County)
- ▶ **Since COVID 19 unemployment has reached 37%, food insecurity and community feeding need have skyrocketed**

Poor Community Wellness Indicators

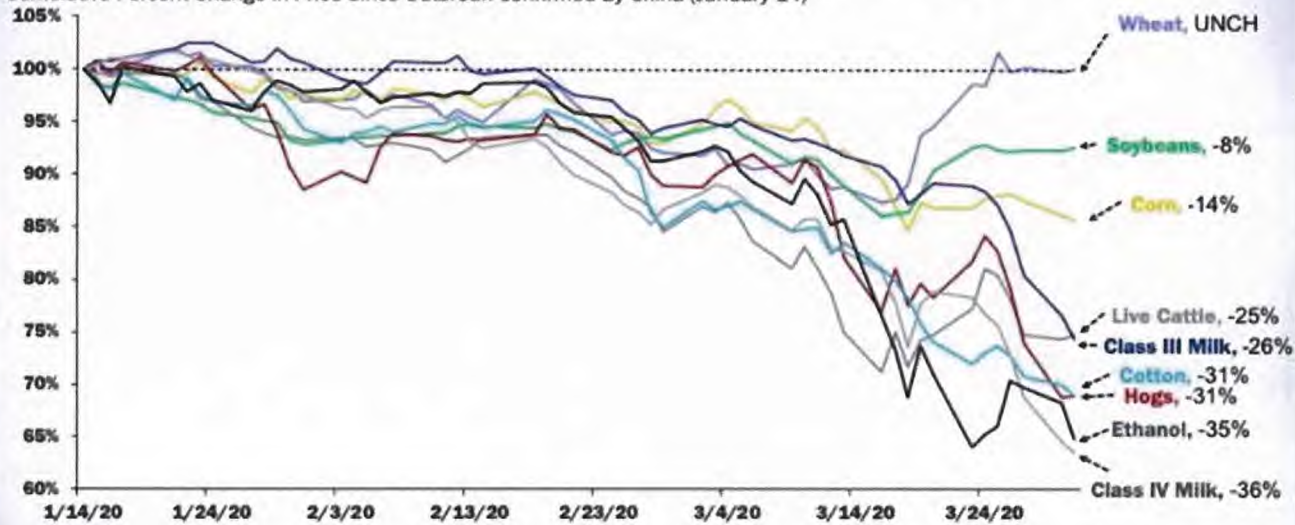
- ▶ Hawaii spends and estimated \$1,240,000,000 on obesity and diabetes related medical costs annually. (Hawaii Dept. of Health, 2015)
- ▶ Maui County has the highest rate of all Hawaii counties of hospitalizations due to short-term complications of diabetes.
- ▶ National trend is that 1:3 children will have Type II diabetes. Hawaii has a much higher rate of 1:2 children
- ▶ Economic conditions are highly correlated with health and the percent of all people living below poverty in Maui County is 8.9%.
- ▶ The poverty rate for Native Hawaiian and Other Pacific Islanders is 14.8%.
- ▶ These numbers is predicted to increase dramatically due to the economic fallout of COVID 19.

Diminishing Agricultural Industry

- ▶ Since the 1980's, Ag land acreage has reduced by 50% and has remained largely for export. [Pre-COVID] (UH Hilo, Statewide Agricultural Land Use Baseline, 2015)
- ▶ Net income for Hawaii farmers has been decreasing dramatically since the 1980's, and this has caused a significant decrease in the agricultural workforce. [Pre-COVID]
- ▶ Due to the closure of hotels and restaurants, Hawai'i's farmers and ranchers are suffering a 50% decline in sales on average. [Post-COVID]
- ▶ Estimated sales losses for local food producers alone average \$2M per week. Other agricultural sectors have been heavily impacted as well. [Post-COVID]

Impact of COVID-19 on U.S. Commodity Futures Prices

Cumulative Percent Change in Price Since Outbreak Confirmed By China (January 14)



AMERICAN FARM BUREAU FEDERATION*

Source: Barthart, Farm Bureau Compilations

Supply Chain Risks

- ▶ Natural Disasters
- ▶ Climate Change
- ▶ War
- ▶ Trade Conflicts/ Embargos
- ▶ Political Instability
- ▶ Economic Instability
- ▶ Rising energy costs
- ▶ Peak Phosphorus
- ▶ An aging workforce
- ▶ A lack of a viable and humane guest worker programs
- ▶ The low level of land ownership by farmers
- ▶ Competition for water
- ▶ Pest resistance to chemicals and genetic traits
- ▶ A failure globally to invest public funds in agricultural research

Areas of Need

- ▶ Infrastructure
- ▶ Funding
- ▶ Research and Development
- ▶ Education
- ▶ Outreach
- ▶ Advocacy
- ▶ Regulation Assistance
- ▶ Agency Coordination
- ▶ Workforce Development
- ▶ Inspection and Enforcement
- ▶ Resource Regeneration & Protection
- ▶ Contract and Procurement
- ▶ Transportation
- ▶ Agricultural Theft, Vandalism
- ▶ Liability
- ▶ Agricultural Sciences & Economics
- ▶ Data Collection & Analysis

Current Limitations (State DoA)

The Hawaii State Department of Agriculture received \$79 million, or **0.045%** of the state's \$17.5 billion FY 2019 budget.

AGR 101- Financial Assistance for Agriculture -Historical low interest rates have affected the program's revenue, the program's operating expenditures have been reduced through position vacancies and cost cutting measures and the demand for loan remains constant and is anticipated to increase

AGR 122- Plant Pest and Disease Control -The FB 2018-19 funding level will not result in any new programs unless existing programs are re-prioritized.

AGR 141- Agricultural Resource Management -Environmental concerns are affecting the ability of the program to meet its development responsibilities because rules, regulations, and statute changes limit availability of land and water. The cost of maintaining the irrigation systems properly, while remaining fiscally responsible, has reached a critical juncture.

AGR 151- Quality and Price Assurance -Regulatory functions are at low priority, with emphasis on complaints and preventing violations through education, to more effectively utilize branch's reduced staff.

Current Limitations (State Department of Agriculture) continued

AGR 153- Aquaculture Development -operating personnel and costs were significantly reduced in 2010; projections for the activity reflect targeted efforts to maintain a level of service with the resources available, despite anticipated larger increases in need.

AGR 192- General Administration for Agriculture -Past reductions in personnel and resources have impacted program effectiveness and level of service. In addition, new federal and State legislation, standards and requirements as well as new programs have continued to place new responsibilities and demands on the support staff. Additional responsibilities have been assumed with no additional resources.

AGR 846- Pesticides - For all of Maui County the state only provides 2 Pesticide Inspectors and 1 Education Specialist

AGR 812- Measurement Standards -Due to lack of personnel, the program no longer supports coffee and other industries with regard to labeling accuracy or complaints and now focuses inspection activities on sampling rather than 100 percent annual or semi-annual inspection as previously provided. No neighbor island support is active.

Current Limitations- Maui County

- ▶ Unlike any other county in the State, Maui County spans 4 islands (Maui, Molokai, Lanai & Koho'olawe)
- ▶ Currently agricultural related issues and duties are divided among at least 5 of departments. (DEM, DWS, DHHC, OM & DOT)
- ▶ The County employs one agricultural specialist for the entire county, under the OED division of the Office of the Mayor
- ▶ This year the Council allocated an approximate \$8.5M in agricultural related grants, these grants span several departments and the County also had to recruit MEO to manage the \$2.5 million in mico-grants for farmers.
- ▶ Currently reliant on the State, Nonprofits, individual advocates and educational groups to manage the agricultural sector.
- ▶ Competition for scarce resources and lack of oversight have created huge divides within the agricultural sector and its stakeholders

Connecting the Dots



What is Agriculture?

On a macro level agriculture can seem like a really narrow sector, with five main industries.

1. Arable Farming- Larger Scale
2. Horticulture- Smaller Scale
3. Animal Husbandry
4. Aquaculture
5. Forestry

What Agricultural Really Encompasses

Arable Farming

- Wheats
- Grains
- Grasses
- Fruits
- Root crops
- Cover crops

Horticulture

- Fruits
- Herbs
- Root Vegetables
- Flowers
- Medicinal plants
- Hardwoods
- Groundcovers
- Native Species
- Processing facilities
- Nutrient recycling
- Seed Banking

Animal Husbandry

- Cattle Farming
- Dairy Farming
- Poultry Farming
- Pig Farming
- Sheep Farming
- Goat Farming
- Bee Farming
- Land Management
- Fiber
- Hunting
- Manure
- Labor
- Pest and Weed Management

Aquaculture

- Mariculture
 - Mollusks
 - Crustaceans
 - Finfish
- Algaculture
 - Phytoplankton
 - Microphytes
 - Planktonic algae
 - Macroalgae aka Seaweed
- Integrated Multitrophic Aquaculture
- Open Water Culture
- Race Ways Culture
- Cage and Pen Culture
- Recreation Fish Farming
- Bio-treatment or Biological Control

Forestry

- Agroforestry
- Forest Farming
- Silviculture
- Carbon Sequestration
- Conservation
- Preservation

Invasive species

- Research
- Tracking
- Management
- Eradication
- Research and development

Added- value products

- Canned Foods
- Meat Alternatives
- Grains
- Pastas
- Dairy
 - Milk
 - Cheeses
 - Yogurts
 - Creams
 - Butters
- Snack Foods
 - Fruit jerky
 - Meat jerky
 - Chips
 - Nuts
 - Candies
- Dairy Alternatives
 - Nut milks
 - Nut Cheeses
 - Plant-based Kefirs
- Jams, Jellies, Preserves and Purees
- Honeys, Syrups, Sauces, Salsas and Relishes
- Fruit, Seed and Nut Oils
- Beverages
 - Beers, Wines and Spirits
 - Sodas
 - Coffees and Teas
 - Juices and Ciders
 - Kombucha and Jun
- Baked Goods
- Beauty Products
- Personal Care Products
- Essential Oils
- Accessories
 - Purses, bags, hats, wallets etc.
- Household products
 - Cleaning, storage, everyday use products

Agricultural Sciences

- Agronomy
- Soil Science
- Horticulture
- Pathology
- Entomology
- Plant breeding
- Environmental science
- Molecular biotechnology
- Extension
- Economics

Workforce Development

- Farmers
- Foodscapers
- Farm Labor
- Plant and Tree Health experts
- Agricultural economist
- Agriculture policy analyst
- College/university faculty
- Consultants
- Cooperative extension agent
- Farmers/Ranchers/Feedlot manager
- Food/grain broker
- Grain elevator manager
- Import/export agent
- International development specialist
- Market researcher
- Natural resource manager
- Sustainable agriculture
- Veterinarian
- Zoological Horticulture
- Business consultant
- Commodity merchandiser/Broker/Trader
- Agricultural Credit Analyst/
Specialist
- Crop supervisor
- Farm co-op manager
- Financial Analyst/Auditor
- Insurance agent
- International business
- Marketing specialist
- Operations analyst
- Plant supervisor
- Production agriculture manager

Research and development

- New and emerging industry research
- Integrated pest management
- Farming technologies
- Processing and distribution technologies
- Soil remediation
- Biological Controls
- Effects of climate change on the local agricultural sector
- Data Collection and Analysis

Agricultural Engineering

- Design
- Construction
- Farming equipment
- Processing Machinery
- Packaging Machinery

Plant-based Plastics & Packaging

- Vegetable fats and oils
- Starches
- Straws
- Grasses
- Woodchips
- Sawdust
- Recycled food waste
- Fungi

Textiles

- Plant Based Silk
- Cottons
- Cordage
- Plant-based Polyesters
- Plant-based Leathers
- Felt
- Wool
- Wood Pulp-based Rayon
- Jute
- Bamboo
- Linen
- Furs

Construction Materials

- Hardwoods
- Softwoods
- Bamboo
- Earthcrete
- Hempcrete
- Bio-based Insulation

Waste Streams

- Composts
- Biofuels
- Enzymes
- Vitamins
- Antioxidants
- Animal feed
- Antibiotics, and other chemicals through solid state fermentation (SSF)

A 10% increase of locally sourced food production would create approximately \$313 million in tax revenue circulating locally. (Office of Planning, Increased Food Security and Food Self-sufficiency Strategy, 2012.)

	Local production minus export*	Estimated total consumption from local production*	Potential import replacement*	Economy-wide impact on			
				Sales	Earnings	State tax collections	Jobs
				(\$ million)	(\$ million)	(\$ million)	(number)
Beef	5.08	4.50	5.08	9.64	2.59	0.32	123
Pork	4.55	3.90	4.55	8.65	2.32	0.29	110
Eggs	8.98	20.00	8.98	17.06	4.58	0.57	217
Fresh milk	18.39	10.00	18.39	34.94	9.38	1.16	445
Fresh fruits	21.40	34.78	21.40	41.73	12.41	1.60	668
Fresh vegetables	60.92	33.50	60.92	125.49	32.90	4.75	1,602
Total	119.31	n.a.	119.31	237.51	64.17	8.69	3,165

Notes: *At farm-gate values, 2005. †Hawai'i Department of Agriculture's estimates.

Sustainable Regional Agricultural Systems Design

- ▶ Economically viable for farmers and consumers
- ▶ Use ecologically sound production and distribution practices
- ▶ Enhance social equity and democracy for all members of the community.
- ▶ Increase communication between the actors in the food system and consciousness of ecological and socioeconomic feedback in the system



Benefits to the County & Local Community

- ▶ Increased Food Security
- ▶ Boost Local Economy/ Wealth distribution
- ▶ Careers and Jobs
- ▶ Much Needed Assistance for Our Farmers
- ▶ Agricultural Data for More Informed Decisions
- ▶ Increase in Biodiversity
- ▶ Increased Ecosystem Health & Longevity
- ▶ Combat Gentrification & Urbanization



Urgency

The COVID-19 health crisis has brought on an economic crisis, and is rapidly exacerbating an ongoing food security and nutrition crisis. In a matter of weeks, COVID-19 has highlighted the underlying risks, fragilities, and inequities in our food systems, and pushed them close to a breaking point.

Our food systems have been on the verge of collapse for decades:

Many of our children have been one school meal away from hunger;

Countries who supply our food are at risk of export bans;

Farms locally are one crop failure away from bankruptcy; and

Farms who grow our food are one travel ban away from critical labour shortages.

We must act now before it's too late!

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Mahalo