

Sustainable Agriculture Skill Panel Forum
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Full Build-Out of Agriculture Infrastructure

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Discussion Outline:

- I. Introductions: Why are we here?
- II. Setting the Context Discussion:
 - a. What is the current state of communication between educational entities and the agricultural industry on preparing for a full build-out of agriculture infrastructure?
 - b. What is the current state of labor and labor shortages as it affects a full build-out of agriculture infrastructure?
 - c. What is needed to achieve a full build-out of agriculture infrastructure?
- III. Preferred Vision in 10-20 Years
- IV. Develop Priorities
 - a. What are the opportunities or supporting forces that will move us closer to our best case scenario/vision?
 - b. What are the barriers or restraints that hold us back from moving closer to our best case scenario/vision?
- V. Outline Actions for Priorities (time permitting)

I. Introductions: Why are we here?

- Getting local foods into educational programs and schools
- Our role in work force development
- What the Hawaii Department of Agriculture do to help?
- See Hawaii ag move forward
- Learn about development of infrastructure
- Connections with community
- How the message of ag infrastructure is portrayed
- Be a part of efforts to make Hawaii a stronger place, learn what's going on
- Want to be part of ag infrastructure
- Initiatives for ag in the prisons
- Learn more what community is doing and how to be a part of it
- Ideas for facilities that process food beyond just delivery of fresh food
- Water – forest and forest management and ag delivery
- Expand business model, help put together programs & address barriers
- Listen and meet folks in ag business
- Neighbor Islands - stay in sync with others in rest of state
- What infrastructure can we be part of to help us?

- Bridging energy and food
- Promoting local food products for sale at retail
- Infrastructure to support water, energy & new technology
- How to help farmers make money
- Sustainability

II. Setting the Context Discussion

What is the current state of communication between educational entities and the agriculture industry and government [added by group] on preparing for a full build-out of agriculture infrastructure?

What is the current state of labor and labor shortages as it affects a full build-out of agriculture infrastructure? [Q1&2 addressed at same time, per group decision]

- Security
- Need farmers on elevations
- Size of extension staff is shrinking
- USAA staff is sufficient
- Hostility/lack of understanding on part of DOE schools to having certified nursery in school (Put worst students in school ag programs)
- Diminished work force of extension staff
- Need stronger links from research/education to farmer
- Significant movement in lower schools to develop gardens – integrated with curriculum
- Significant challenges at High School level, resources issue, “extras” cut with limited resources
- Real potential to catch students at High School level
- Mistrust between farmers and government – heavy hand, language not understood, no connection to problems, communication gap in language/trust/understanding
- Extension agents were trusted
- Government agencies are not there to assist, but to find you out, e.g. OSHA inspectors. They need to work with rather than inspect.
- Fragmentation now in programs to bring up youth – e.g. Future Farmers, 4H. Need a comprehensive plan to develop young farmers
- Average age of farmers is 60+
- Can’t get workers to work on farms
- ID range of workers needed – from scientists to farmers
- Number of farmers in state has increased, but Tropical Agriculture division at CTAHR has decreased
- Need CTAHR to work Hawaii issues
- Offer summer experiences to youth
- Make ag mandatory in schools. Kids need to learn from an early age about ag
- First Step: Strong curriculum that could be added to DOE core curriculum. (e.g. In gardening there’s measuring/math/science.)

- There are young folks who want to farm, but can't get on land and make enough money. Won't farm if can't make money.
- As a society we need to do what we can to support farmers.
- Need a processing facility
- Need cheap energy to make farming viable. Not oil, alternate energy sources need to be developed.
- Government over-regulates: for example, dams/streetlights/curbs/gutters requirements make it more expensive
- We have a good network of watershed management partnerships, but these need to work better with ag
- There are good models of partnerships, need to evaluate, are they producing results?
- Need to incentivize maintaining dams to make it benefit ag & landowners – recognize the benefits to society
- Look at water as a system
- Issues is energy needed to transport water
- Diversification – high cost of maintaining infrastructure without economies of scale for small farmers. Previous big systems were put in place by Federal money. How to sustain with private funds?
- Ag labor: What percent of population is needed to sustain ag? How do we ID those young people who really want to do ag? And how to guide them through education to get there?
- We have a lot of sun energy. If Big Island can use sun & rain then don't need big infrastructure

What is needed to achieve a full build-out of agriculture infrastructure?

- Need more extension agents to support farming community
- Internships & on the job training opportunities
- Paid internships that meet educational goals
- Need trained leaders – experienced with politics, managing people, and in the field (example: Nature Conservancy leadership training program)
- Target students already in ag programs (4H, Future Farmers), provide incentives such as paying tuition
- Farmers mentoring farmers
- Collaboration needed in system-wide infrastructure projects: use other successful models as case studies to identify what is needed for success
- New kinds business models needed
- Language assistance needed for influx of new immigrant farmers
- Allow bringing in more foreign workers
- Need new cultivars for farmers
- Program staff development for Dept. of Ag and other government agencies to help inspectors better assist farmers. Need managers in these agencies who support that in staff.

III. Preferred Vision in 10-20 Years

What is the best-case scenario for growing the workforce among farmers and farm workers?

- Have group of engineers that help ag on water and energy issues
- Scientists that help with new technologies
- Energy and water systems are coordinated – energy is used when cheapest
- Need workforce that supports alternate energy systems
- Farmers are trained entrepreneurs with systems thinking, ready for a different world
- We can feed ourselves better
- Farmers will need to be all parts of the food chain: broker, manufacturer, producer, etc.
- We'll be sustainable with our food production
- Farm Communities: Self-sufficient agricultural clusters with multiple farmers, energy sources, production and processing facilities
- New farmers trained in incubators to participate in the “cluster”
- Hawaii students are enthusiastic about getting into ag because it is viable and it is essential

IV. Develop Priorities

What are the opportunities or supporting forces that will move us closer to our best case scenario/vision?

- Identifying and learning from models that are already out there. Examples: Kunia Village Ag project, Pacific Gateway Center, Kalani High School
- Kupunas could be mentors for youth. Create a “Kupuna Partnership”
- Real-world application of problem-solving in youth programs
- Private sector involvement through tax credits can create incentive to invest
- Hana Pono model should be explored
- Support from government policies to create tax credits
- Lots of programs available to develop marketing skills – need to connect them to ag industry
- New immigrants who want to farm
- Changing our stories to “Wow, isn't this great!”
- Difference between ag laborers and ag entrepreneurs
- Existing model of community farming exists – leasing of land to area farmers in the community, sharing of costs and infrastructure
- Partnering energy with ag – HECO rents land for solar farm – some energy comes back to the farm, opportunity for ag under the solar
- Farms are doing a public benefit, should pay back that benefit from public sector
- Lots of small farms are in place
- Improve productivity of existing labor through improved methods, etc
- Link workforce curriculum to specific industries

- Explore the Hana Pono model
- Economics of energy (this could be an opportunity or a barrier)
- Options for energy self-sufficiency, such as geo-thermal, hydro, solar
- Irradiator now being built, partners with Weyerhouser for containers, opportunity for export
- Hawaii has people of vision and action
- Bio-security program
- It's a good time/opportune to recommend policies, currently lots of support
- Co-op opportunity, offers flat business structure, lots of money going back to coop, need to understand this model better

What are the barriers or restraints that hold us back from moving closer to our best case scenario/vision?

- Lack of credit lines and capital for farmers
- Expensive to buy solar
- Many farmers are older and their children are not interested in farming
- Ag zoned land leased to farmer on short time frame, no incentive to invest long-term
- Designated ag land is not always good for farming
- Cost of energy to run equipment – oil prices
- Cost to grow on mainland vs. locally
- Quarantine program increases costs
- If state tax credits are offered they need to be offset in order to balance the state budget
- Not attractive to work on a farm
- Hiring of foreign workers is difficult
- Lack of local people who will take low end farm labor work
- Public policies re: trade agreements

Cluster and prioritize like ideas among opportunities and barriers

Note: Clusters were not indicated

- Tax credits to increase capacity for farmers or private investors to invest. (16 votes)
- Certified/licensed people to run water & energy systems, including a public/private partnership to provide hands on experience in the field. (10)
- Partner with 2 existing models to develop workers: Pacific Gateway Center – immigrant model, & Richard Haas' community model. (9)
- Support CTAHR's extension service and more researchers for new cultivars. (5)
- Create partnerships with people who have the needed skill sets. (4)
- Statewide inventory of existing manufacturing & processing to identify areas for new companies to fill, showing where workers will be needed. (4)
- Determine what labor force and training is needed to support new technologies for ag. (4)

- More continuing education for farmers and farm workers to develop needed skills. (3)
- Mentoring programs with kupuna. (2)
- Communication with major land-holders for water infrastructure support. (2)
- Putting in basic infrastructure that's still missing – roads needed on Big Island. (2)
- Develop management skills to help with managing workers. (0)
- Provide internships with the state water system. (0)
- Develop more certified energy engineers with experience in ag systems. (0)
- Work within DOE science & engineering programs to integrate ag into STREAM curriculum. For example, the Hana Pono model. (0)