

THE FOOD CHAIN

10-31-09

Hawaii's volcanoes put on a fantastic show for nature lovers, but its lava also creates a rich soil that gives locally grown food their distinctly delicious flavors. Agriculture in Hawaii suffers from memories of plantation days gone by. No longer simply sugar and pineapple, our farmers deserve a fresh start of support. There are several reasons why fostering our farms makes good sense. The biggest is it helps the economy. The more we can produce our own food, the less money we need to export outside our cash circle, which helps to keep a positive state balance sheet overall. The meals we eat will be fresher, more nutritious, and tastier when we buy and eat locally grown food. Expanding our farmer's marketplace locally and elsewhere means more jobs will be created, and diversify and strengthen our economic base.

Fostering this industry means making sure that we expend the energy to promote it, and make sure the requisite infrastructure and industrial side supply chain are in place. It will take a coordinated effort between the private and public sectors.

The in-state market for farmers needs private sector support. Health safety standards require that foods be chilled at certain temperatures while transported to prevent bacterial growth. Young Brothers has chilled cargo service by barge, but having it by air gets food to interisland markets faster. Let's hope that one of our in-state airlines consider and can feasibly offer this service to increase the in-state market for our farmers.

Out of state promotion would help as well. We have a wealth and wide range of products – teas, coffees, herbs, lettuce, fruits, vegetables, avocados, tomatoes, cheeses, and many, many more. Our year-long summer gives us favorable growing conditions. We should try to find grocers and food processing companies both domestic and foreign who would be interested in carrying our agricultural products in their stores or including them as ingredients in their food products.

A food processing plant or two would help, too. Sam Choy may be a famous local chef, but the salad dressings that bear his name are processed in California for lack of a food processing plant in Hawaii. The Executive Branch should try to recruit food processing businesses to invest here, to produce food products using the flavorful vegetables, fruits, and herbs grown on our island soil. Why is this important? Farmers can only sell in grocery stores what satisfies grade requirements. Vegetables and fruits that literally don't make the grade - too long, too short, not the right color, etc. -- cannot be sold retail, and that can add up to a lot of waste of perfectly edible food and loss to the farmer.

Off-grade produce still possess the same delicious flavor as grade food but don't look as pretty or uniform. On the mainland, off-grade produce get channeled into food products such as soups, salsas, sauces, stews, frozen dinners, and other yummy products we gladly buy. It would help farmers with profitability to have an avenue for selling their off-grade produce. The

food processing plant, moreover, is an employer. The plant would provide jobs to residents. There is no denying that our volcanic soil gives our onions, lettuce, avocados, fruit, teas, coffee, herbs, and other food products the fabulous flavor it has. Think of the terrific salad dressings, salsas, and so on that Hawaii could sell. Being able to expand Hawaii's food product line can help strengthen our economy by offering a more diverse range of products and keep people employed.

Then there's the waste issue for those parts of food products that can't be eaten, what's called biomass. Instead of stuffing it into landfills, the throwaways can be diverted and processed by anaerobic digesters to produce biogas that then can be used to generate electricity. Gas digesters have long been used in Europe to deal with the land scarcity issue, by extending landfill life through diverting waste away from landfills. Gas digesters (anaerobic digesters) take greenwaste and turn it in to methane gas and compost for soil improvement. There are more than 85 of these facilities throughout Europe and many others planned.

Even China has long used gas digestion, and is planning on expanding its use. China set a target of 18.5% biomass by 2010, as a source of renewable energy. The biomass includes food waste, agricultural waste, industry, municipal solid waste, sewage sludge, animal manure, and the like. Nine plants are being planned for Beijing using restaurant throwaways, animal waste, and municipal waste. Other large-scale biowaste plants are currently under consideration in several regions in China.

Homegrown / small scale urban household biogas digesters have been in use in southern China for about a hundred years. The first biogas company opened in Shanghai in 1932. About 10% of the rural population, by 2005, was producing biogas for their cooking and lighting needs, giving these areas a degree of independence from central energy supply systems. Using biowaste to generate electricity also resolves water and soil pollution problems for that area. These advantages give motivation for further development under China's national plan. Since 2001, 4,000 middle- and large-scale biogas plants for electricity production were built mainly at pig, chicken and cattle farms. Other industries, such as sugar or alcohol production, can use its waste to generate electricity. The distillery in Henan supplies 20,000 households with biogas.

Waianae coast and Windward residents know all too well about landfills. Extrapolating from City & County statistics and UH estimates, the amount of food and landscape waste could be around 1000 tons a day. There are also nine wastewater treatment plants on Oahu. Instead of spending money to ship our trash overseas, the City and County would do well to invest in anaerobic digestion facilities that can supply enough power to operate the wastewater treatment plants and send the excess electricity into the grid. The long-run benefits are local supplies of electricity, extended landfill life, job creation, and reduction of dependence on foreign oil. When we use local supplies of stock for electricity generation, we can keep part of that exported \$7 billion in-state, circulating through our local businesses and keeping our economy healthy. Locally generated electricity reduces losses through transmission lines, for greater efficiency of distributing power. Wisconsin and other states have gas digester facilities.

The City of Los Angeles is constructing a facility following a successful, small-scale pilot project that used food waste from airport concessionaires.

The food chain – more than just a biology lesson and better for the economy.