

Evaluating Sustainability in Agriculture

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Interest in food security and sustainable agricultural production is at an all time high. Many different points of view about the most important aspects of food production exist. Some consumers may feel that organic is the way to go all the time. Others may prefer local products and decreased food miles over imported organic products, while another group may be focusing on price or whether the produce is genetically modified. Economists look at the benefits and costs of each option and generally promote the option that produces the most benefits for the smallest costs. This article presents information about different aspects of food production that is linked to sustainability, and highlights the need to develop a sustainability evaluation system for agriculture in Hawai'i.

Some benefits and costs of various types of food production can be determined by examining market data. US organic crops have higher prices and lower per acre yields (de Ponti et al., 2012). Some feel that yields are low because lower yielding, food grade varieties are used by most organic producers. On average, organic returns are more profitable due to the large price premiums for organics, but should these premium slip over time as organic production increases around the world, the sustainability return to organics may disappear. Production tends to be concentrated in the drier States, west of the Mississippi. Many organic products are also imported from other countries. Thus, supporting sustainability by supporting organic production may not be possible if organic food products are imported to Hawai'i.



In 2008, organic operations accounted for less than one percent of total crop acreage. Therefore, the bulk of US food production comes from conventional operations. The [“Know Your Farmer” program](#) recently launched by the USDA

is aimed at educating consumers about local producers in order to decrease the miles food travels to reach consumers' plates. Some may feel that the producers involved in this [“Know Your Farmer” program](#) are organic, although this is not necessarily the case. One issue that concerns consumers relative to local food is the higher prices that are often associated with local food products.

For many years, US food prices have been among the lowest in the developed world. Higher energy costs and global climate change are expected to increase the need for a more productive food supply system. For consumer groups, food prices are a big concern as all food prices have increased. In Hawai'i, local products often have significantly higher prices than imported products, and given the increasing higher cost of living in Hawai'i, local consumers may not be able to afford local foods. This means that the cost of supporting sustainability by buying local may also become too costly for consumers to bear.

The issue of GM food also remains a big point of contention here in Hawai'i and around the world. GM food products are thought by some to entail certain risks and many consumers want GM products to be labeled (Shehata and Cox). Those supporting GM food highlight the sustainable benefits of reduced pesticide use and higher crop yield.

The Food, Conservation, and Energy Act of 2008 required the US Secretary of Agriculture to “establish technical guidelines that measure the environmental services benefits from conservation and land management activities.” In response, the [Office of Environmental Markets \(OEM\)](#) was established to support the development of emerging market for carbon sequestration, water quality, wetlands, biodiversity and other ecosystem services. The overall goal of the OEM is “to build a market based system for quantifying, registering, and verifying the environmental benefits produced by land management activities.” This effort is expected to yield another approach for producers to demonstrate their commitment to sustainability and receive returns for this support. While programs of these types are not common in Hawai'i, agricultural producers on O'ahu provide [open space benefits](#) and the value of these benefits have been examined by [CTAHR faculty](#).

Experts around the globe are calling for a system that can be used to assess the sustainability of agriculture. Their hope is that this system could be used to inform local producers and consumers. Sustainability evaluation systems are being developed for the tourism sector in Hawai'i (Cox et al. 2008), and such a system could also be developed for Hawaii's agricultural sector. Clearly, sustainable food production is an important goal and the path to this goal does not look the same to everyone now. Much more work is needed, many disagreements will occur along the way, and the journey is something that needs to begin now.

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