



DIGGING DEEPER

Bringing a systems approach to food systems

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Feedback loops

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Continuing from my first column in JAFSCD’s volume 3, issue 1, *feedback loops* are another systems concept with a great deal to offer to food systems projects and activities at any level — local to global. Feedback can be thought of as “an influence or message that conveys information about the outcome of a process or activity back to its source” (Capra, 1996, as cited in Sundkvist, Milestad, & Jansson, 2005, p. 225). Feedback loops act as communication and control devices in both natural and socioeconomic systems.

Most people who have worked on sustainable

agriculture are accustomed to thinking about ecosystem feedbacks such as those from eroded land, polluted water, declining biodiversity, and many other resource problems. People who study the phenomenon point out that feedback can be masked (when information can not be detected) or disregarded (when a problem is not addressed even though it is perceived). In the latter situation, often no effective measures are taken to change management practices — which allows disturbances to accumulate and create conditions for large-scale crises later on (Berkes & Folke, 1998, cited by Sundkvist et al., 2005), for example dead zones.

With regard to masked feedback, we can examine the problem of long distances that impede the flow of information in the food system and block ecological feedback along the whole chain (Princen, 1999). We see this as the problem of not knowing how food is produced or where it comes from. Without information, the likelihood of farmers making good decisions on management and consumers good decisions on purchases is reduced. Also, as feedback loops become looser and less effective, the motivation for environmental action is reduced (Levin, 1999).

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Experts have called for tightening the feedback loops to make it possible for people other than farmers to pick up ecosystem signals. One way is through increased reliance on local ecosystems and food production. A second is to develop systems that provide the kind of information needed for consumers to know where and how their food has been produced (Sundkvist et al., 2005). As I mentioned in my last column, local food systems are limited in their ability to provide significant amounts of food for a population. Therefore there is a need to strengthen feedback mechanisms via labels, standards, and accurate information about national and global food suppliers.

There is another type of feedback that is controlled entirely by people and their organizations, and one for which distance can't be blamed: evaluation. How are we learning whether local food system activities are successful, and how this is being communicated back and forth between the other nested scales in which local functions? What I perceive is that not much of this is occurring — so instead of a problem of disregard or not perceiving outcomes, too often no measurements are being taken at all to supply the information needed. Project directors, including leaders of food policy councils, should be identifying indicators or benchmarks and measuring them frequently; we call this evaluation or, in policy language, oversight. What I see are some good evaluation efforts in some places and few efforts in most other places. This is despite the fact that the critical need for evaluation has been known for a long time. Garrett and Feenstra discussed it in their manual *Growing a Community Food System* in 1999. The Center for an Agricultural Economy (CAE) writes on its website that evaluations are used “to justify certain projects, to know what is working and further successful initiatives, or for other communities to use if they are looking to follow a path” (CAE, n.d., para. 3). There are good examples, e.g., the Marin County and Sacramento, California, comprehensive plans, which include specified

methods for evaluating their achievements (Hodgson, 2012).


On the negative side, Seattle Local Food Action acknowledges that its lack of program measures “makes consistent and meaningful evaluation difficult” and “limits the Department’s ability to develop plans for improvements, adopt best practices and enhance performance” (Seattle Local Food Action, 2009, p. 3). Hardesty (2010) mentions in her assessment of local policy that she found no studies measuring the impact of government policies that support local food. Evaluation has been discussed in this journal in several of Ken Meter’s columns — but not many evaluation studies can be found here. Without such evaluations we don’t know either the outcomes or impacts of these activities; we don’t know what parts of projects

are working; we don’t know if a problem has been solved or if it is even solvable; and without evaluation groups can’t share their successes and mistakes with others in a useful and replicable way. Furthermore, resources are probably not being used efficiently if everybody is reinventing every wheel everywhere. And perhaps most importantly, feedback is also information transferred between different levels of society; in a systems context, evaluations are critical for the scales, e.g., local and state, to operate together, to be moving in the same direction, and to grasp the fact that they are dependent on each other.

There are many different methods available (too many to list) for conducting small to large evaluations. By “small to large,” I don’t mean the size of the project; I mean the amount of information wanted about a project. Methods are becoming more sophisticated and systems-oriented as people recognize that food systems are what can be thought of as complex adaptive systems in which individuals act in ways that are not always predictable and whose actions change the context for others (Complex Adaptive System, 2011).

But I don’t believe that groups have to do costly, long-term, complicated evaluations to

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gather information that will help with planning and make it possible to turn around underperforming activities. It seems to me a set of simple templates could be developed that nonprofessional evaluators can use to get quick and usable feedback. The most important thing is to do *something* — and to not let the lessons learned slip away from all the useful work people are doing. 

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