

FEEDING NINE BILLION: LOCAL FOOD SYSTEMS

“FOOD FOR THOUGHT” QUESTIONS FOR REFLECTION AND TRANSCRIPT

Part One: “Food for Thought” *These are questions on which to reflect and answer during the video. Please answer the following questions on a separate sheet of paper. Use the video transcript below these questions to help with video comprehension. You will also need the video references below the transcript to answer the reflection questions. Return this packet to the teacher at the conclusion of this assignment.*

Video Link: <https://feedingninebillion.com/video/local-food>

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Questions for Reflection:

1. What are three negative aspects of “large corporations” as portrayed by the video? **Environmental damage, exploited workers, displaced traditional farmers.**
2. List three positive aspects of local food systems stated in the video: **Sustainable, equitable, and democratic. Knowledge of food origin. Increased income for farmers.**
3. The first criticism mentioned concerning local food systems is based on population growth. Explain why critiques believe that local food systems cannot meet the needs of our growing world. **Local systems have lower yields than conventional systems.**
4. The video begins to talk about a “compromise” in which we use both conventional and local food systems. Explain, in your own words, how this compromise would take place. **Both systems could be used. Local systems could increase in areas that work best for them. Local systems would provide environmental support for conventional systems.**
5. What are two advantages mentioned in the video to having farms close to urban areas? **People develop a knowledge of food origins. They provide environmental benefits.**
6. Review the references for this video. After reading Reference #8, explain how organic food systems can be more productive than conventional systems if they do not make “more food.” **Organic farms increase biodiversity in the environment. They provide wildlife shelter and food.**
7. What do you feel is the best approach for our growing world: conventional food systems, local food systems, or a balance? Why do you feel this way? How do you think this will be possible? **Opinion based with reasons listed...**

Part Two: Video Transcript:

Hello, my name is Evan Fraser and I work at the University of Guelph in Ontario Canada.

This video series shows that climate change, population growth, and high energy prices mean that farmers may struggle to produce enough food for all of humanity over the next generation. What’s more, many think that because modern farms use a lot of energy,[1] and cause a lot of pollution, our food systems are hopelessly flawed.

These arguments go like this: today a handful of large corporations control the vast majority of the world's food trade[2]. In doing so, they make a huge amount of money by using farming systems that damage the environment, exploit workers, and displace traditional farmers.[3] By contrast, food systems based on local, diverse and small farms that use few chemical inputs like pesticides or fertilizers are more sustainable, equitable and democratic.

This is because when producers and consumers know each other and interact, then the entire community has a say in how food is produced.[4] This should mean that farmers receive a decent income since they will receive a higher percentage of the value of the food they produce. And they should also protect the environment better because consumers will be ok with paying more for food they know isn't covered with polluting sprays. Also, because food is produced and consumed in the same region, the amount of fossil fuels burned for transportation should go down.

Good-bye processed cheese and vegetables from the Southern Hemisphere, and hello locally produced seasonal dishes.

Those of us in the rich parts of the world probably associate these ideas with the "100-mile diet".[5] In the Developing World, these ideas are often described as "food sovereignty" and are promoted by *La Via Campesina*, an international movement advocating that consumers and small-scale producers work together to take control of their food[6]. Many, however, question whether this vision of alternative food systems can provide a viable food security strategy for humanity's growing population.

For instance, while there is a huge disagreement amongst scientists, many point out farms using "alternative" methods tend to have lower yields[7], when compared on a like for like basis, with conventional farms.[8] This means that many scientists worry that if we are going to feed a growing population using "alternative" farming practices, we'll need more land, or we'll have to cut down on our consumption or waste in other ways.[9]

A second common criticism leveled against the promoters of alternative food systems is that whenever "alternative food enterprises" try to grow bigger, they end up taking on many of the traits of conventional systems. For instance, critics point out that when organic and fair trade farms grow they cause many of the same problems as conventional farms[10]. But do these criticisms mean alternative local food systems have no place in the 21st century?

I don't think so. Even if local alternative food systems don't feed all of us all the time, it doesn't mean that that there is no role for such systems as a component of a secure and resilient food security strategy. Local or alternative food systems add diversity to our farming landscapes. And diversity is very important because alternative farming practices also often provide the template to help improve the design of more mainstream systems. Also, alternative food systems, especially in poor regions of the world, provide a buffer between consumers and the vagaries of the international market, while also empowering people by giving them some control over their food.[11] Finally, having local farms integrated into the fabric of urban life connects city dwellers with their food, making them aware of the ecosystems on which we all depend. [12] They provide habitat for wildlife. They trap storm water before it damages people's homes. And they should be beautiful.

Therefore, my own reading of the debate around alternative farming systems tells me that to be sustainable we must support local food systems that use alternative agricultural practices. We need to do this as consumers as well as through policy that should foster local food systems by making sure local farmers have access to local processing facilities and local markets.[13]

But we must also realize that local and alternative won't feed us all. We'll be relying on our conventional farming systems that produce huge amounts of food in the world's bread baskets for the foreseeable future, albeit with high fossil

fuel inputs. So what we need is a balanced approach: our food security will be enhanced if all of us are able to draw from both global and local systems.

But that's all for now. If you are interested in learning more, you might check out my recent book *Empires of Food*. Also, you can find me on YouTube, Facebook and Twitter where I regularly post about issues relating to global food security. And the website www.feedingninebillion.com has annotated scripts for all the videos along with references and our blog.

We hope to see you again, but until then, thanks for watching!

TEACHER KEY

References for Video:

[1] See the following article: von Braun, J. (2008), "High and rising food prices: why are they rising, who is affected, how are they affected and what should be done?", paper presented at the U.S. Agency for International Development (USAID) Conference on Addressing the Challenges of a Changing World Food Situation: Preventing Crisis and Leveraging Opportunity, Washington, DC, April 11. This paper, and a number of others are available at: www.ifpri.org/themes/foodprices/foodprices.asp

[2] Many fear that multinational corporations have monopolized the genetic resources of agriculture, and have thereby threatened heritage seed varieties. Here is an article on this:

WITTMAN, H. 2009. Reworking the metabolic rift: La Via Campesina, agrarian citizenship, and food sovereignty. *Journal of Peasant Studies*, 36, 805-826. This article is available at the following URL: http://landfood.ubc.ca/publications/Wittman_2009_JPS_Food_Sovereignty.pdf

[3] See literature by Kerry Preibisch, for instance: PREIBISCH, K. and ENCALADA GREZ, E. 2010. The Other Side of el Otro Lado: Mexican Migrant Women and Labor Flexibility in Canadian agriculture. *Signs*, 35(2), 289-316.

[4] Here is an academic account of this: Mount, P. (2012). Growing local food : scale and local food systems governance, 107–121. doi:10.1007/s10460-011-9331-0

[5] The following is a great book that details a couple's year of trying to live locally: SMITH, ALISA and MACKINNON, J. 2007. *The 100-mile diet: a year of local eating*. Toronto: Random House Canada.

[6] Described as "the world's largest social movement", La Via Campesina's 20th anniversary is celebrated in this Guardian newspaper article. Provost, Claire. "La Via Campesina Celebrates 20 Years of Standing up for Food Sovereignty." *The Guardian*. N.p., 17 June 2013:

<http://www.guardian.co.uk/global-development/poverty-matters/2013/jun/17/la-via-campesina-food-sovereignty>

[7] While alternative agriculture tends to lead to lower yields, it generally requires lower production costs, thereby giving farmers similar returns on their investment. Reganold, John P., Robert I. Papendick, and James F. Parr. "Sustainable Agriculture." *Scientific American* June 1990: 112-20.

[http://oregonstate.edu/instruct/bi430-fs430/Documents-2004/7B-](http://oregonstate.edu/instruct/bi430-fs430/Documents-2004/7B-MIN%20TILL%20AG/Sustainable%20Agr%C3%89hn%20Reganold.pdf)

[MIN%20TILL%20AG/Sustainable%20Agr%C3%89hn%20Reganold.pdf](http://oregonstate.edu/instruct/bi430-fs430/Documents-2004/7B-MIN%20TILL%20AG/Sustainable%20Agr%C3%89hn%20Reganold.pdf)

[8] It has to be noted that this is a topic where experts really disagree a lot. One major "meta" study (i.e. a study that reviewed the results of a large number of other studies) showed that organic farms are on average 34% less productive than ones that used conventional inputs. (see: Seufert, Verena, Navin Ramankutty, and Jonathan A. Foley. "Comparing the Yields of Organic and Conventional Agriculture." *Nature* 485.7397 (n.d.): 229-32. *Nature: International Weekly Journal of Science*. :<http://www.nature.com/nature/journal/v485/n7397/full/nature11069.html>) But when this study was published lots of authors were quick to point out that organic farmers produce additional benefits for biodiversity that were not accounted for in this paper. Another major review of this topic was published by a large group of scientists in 2009. Called the International Assessment of Agricultural Knowledge, Science and Technology for Development, this report stressed the need to promote what's called "multi-functional" farms, which are farms that provide both food but also environmental benefits too. A summary of this report is available

:<http://www.sciencemag.org/content/320/5874/320.full>. You can also look for the full report "agriculture at a crossroads."

[9] Some scientists call this the "land sparing" or "land sharing" debate. Briefly, it has been argued that there are two basic strategies at play. We can farm intensively in small areas, producing a lot of food in a concentrated region, and thus "spare" land for other uses elsewhere; or we can farm less intensively and let environmental benefits and food production "share" the same landscape. The following link provides a nice summary of this debate:

<http://ecologyforacrowdedplanet.wordpress.com/2012/09/23/land-sharing-vs-land-sparing-meeting-agricultural-and-biodiversity-goals/>

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[10] These academic sources reflect research on alternative agriculture policies.

1. JAFFEE, D. & HOWARD, P. 2010. Corporate cooptation of organic and fair trade standards. *Agriculture and Human Values*, 27, 387-399. <http://www.fairtradewire.com/wp-content/uploads/2010/09/Jaffee-Howard-2010-Cooptation-AHV1.pdf>
2. DOLAN, C. 2010. Virtual moralities: The mainstreaming of Fairtrade in Kenyan tea fields. *Geoforum*, 41, 33-43. <http://www.sciencedirect.com/science/article/pii/S0016718509000037>
3. EDWARD, P. & TALLONTIRE, A. 2009. Business and development: towards re-politicization. *Journal of International Development*, 21. <http://onlinelibrary.wiley.com/doi/10.1002/jid.1614/abstract>
4. TALLONTIRE, A. 2009. Top heavy? Governance issues and policy decisions for the Fair Trade movement. *Journal of International Development*, 21, 1004-1014. <http://onlinelibrary.wiley.com/doi/10.1002/jid.1636/abstract>

[11] Here is an academic article that provides some background on this: Galtier, F. (2011). Which instruments best tackle food price instability in developing countries? *Development in Practice*, 21(4-5), 526–535. doi:10.1080/09614524.2011.566919

[12] Here is an academic article that provides some background on this: BANE, PETER. 2012. *The Permaculture Handbook*. Gabriola, B.B.: New Society Publishers.

[13] Here is an academic article that provides some background on this: GOOCH, MARTIN. 2009. Feasibility study for establishing a local food distribution initiative in Niagara & Hamilton. Toronto, Ont.: Friends of the Greenbelt Foundation.