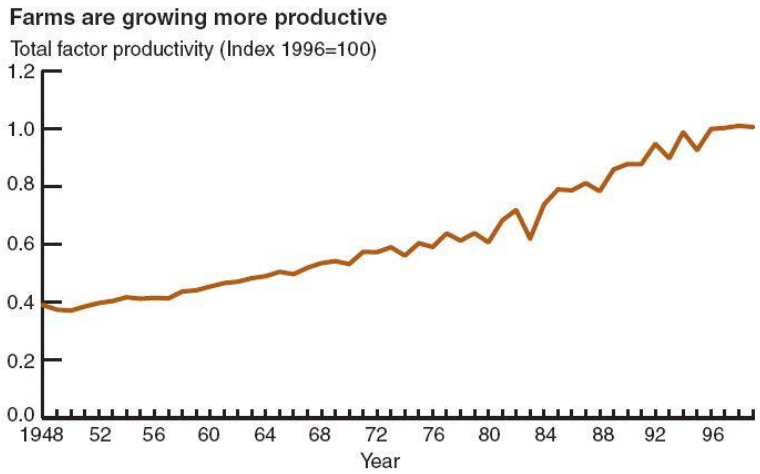
Local Foods and Panoramic Blurriness

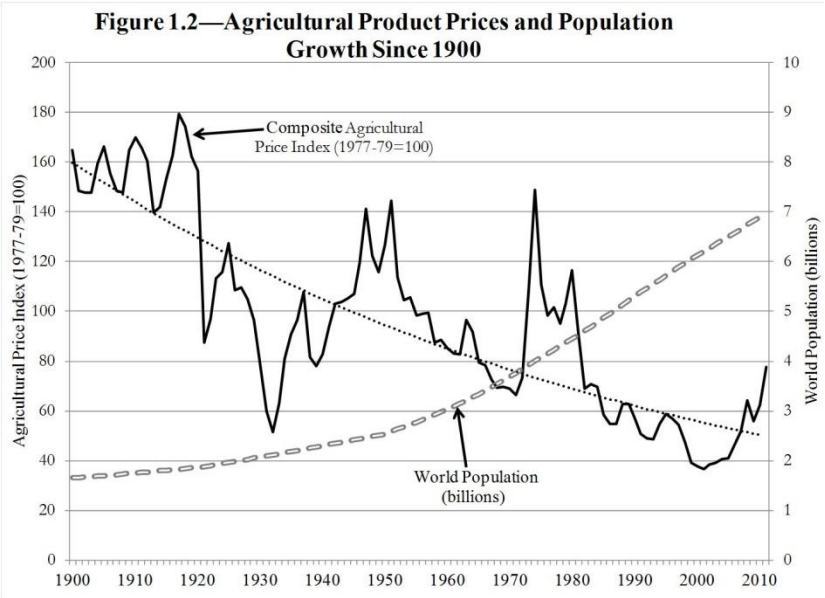
{Under 7:00}

[Figure 1]



Modern agriculture's greatest achievement has been to increase the efficiency of farms, [show Figure 1] allowing them to produce more and more food using less inputs. The result has been a world where the price of farm outputs like wheat and beef have fallen at the same time world population has more than tripled.

[show Figure 2]



Farms are more efficient today for many reasons. The most influential factor I believe is the fact that more efficient technologies have been developed and successfully adopted by large, specialized farms. A farmer today is unlikely to spend her day milking cows, then feeding pigs, then planting

wheat, then harvesting corn, and then weeding her patch of acorn squash. Instead, she will be more specialized. She will use advanced technologies like driverless tractors or automatic milking machines. And she will focus solely on producing one or a few products. One farmer may only raise cattle and wheat, another may only operate a dairy farm, and another may produce solely cotton.

[Talking points: Food prices are lower due to better technologies and bigger and more specialized farms]

In a sense, farmers have become more efficient because they employ what economist Paul Seabright refers to as "tunnel-vision". Farmers have focused on reducing their costs of production while maintaining or improving food quality. Likewise, consumers have focused on minimizing their food costs while still buying foods that provide a satisfying eating experience.

[Talking Points: Farmers and consumers have "tunnel-vision"

They concentrate on farmers' input costs and eating experiences]

Both producers and consumers are essentially focused on reducing the cost of inputs the farmers must purchase to produce food of the same quality or better. When a farmer reduces her per bushel cost of corn production by applying more nitrogen fertilizer, she is rewarded with larger profits. Consumers are also rewarded, as lower farm costs leads to lower grocery store prices.

Both consumers and producers are keenly focused on the farmers' costs of production and the quality of the food as perceived by the consumer. This tunnel-vision has led to tastier foods at a lower price (you can argue whether we eat too much, or that consumers eat less healthy, but one can't deny that it is the consumer who is making these choices for herself). This tunnel-vision allows us to feed more people, and deliver more smiles around the dinner table.

At the same time, we know that there are other things in agriculture that matter, which are not part of this tunnel-vision. If a farmer can lower her pork production costs by reducing the animal welfare of the pigs, she can do so even if the consumer would disapprove, as one cannot tell how a pig was treated by the taste of a pork chop.

[Talking Points: Farmers and consumers have "tunnel-vision"

They concentrate on farmers' input costs and eating experiences

This tunnel-vision ignores some things we care about]

Beef has a higher carbon footprint than chicken, but this higher footprint is not fully reflected in the price of beef, and the consumer may be unaware of this fact. This means that consumers very concerned about global warming may not give carbon footprints much consideration when making their meat purchasing decisions.

Most of the agricultural and food controversies today are an attempt to force us out of this tunnel-vision and to think more about ethics when purchasing food and forming government policies. The organic food movement asks us to think about the pesticides applied on most farms and its effect on people and the environment. Animal welfare advocates want to inform us about how livestock are raised so that we think about animals at the grocery store. Environmentalists want us to know the water pollution that can result from an irresponsible use of chemical and manure fertilizers.

We are asked to step outside of our tunnel-vision and "think globally" where we consider how farm practices impact the world. We are asked to account for things that aren't reflected in farmers' cost of production, and thus not reflected in the grocery store price**.** We are asked to take a *panoramic* view of agriculture, and to do our best to make sure the food we eat is indeed ethical food.

[Talking points: Panoramic view of ag = understand how farming practices impacts society, animals, the environment, etc.

Things not reflected in farmers' cost of production]

To comply with this request is admirable, and almost everyone from the farmer to the urban shopper is doing so in some regard. To comply with this request is admirable, but it is also very difficult. Just think about how hard it is to know how the production of your cheeseburger impacts

- soil erosion
- pollution of streams, rivers, lakes, and estuaries
- welfare of beef cattle
- welfare of dairy cattle
- pesticide residues in food
- global warming
- social justice
- and the like.

It is an intimidating task, to be sure. Because knowing the precise relationship between our diet, society, animals, and the environment, I say that this *panoramic* view of agriculture is also a *blurry* view.

[Talking Points: Panoramic depictions of agriculture and going to be blurry

One can't identify <u>all</u> the impacts of agriculture on the world]

This should not discourage us from pursuing ethical food. Behaving ethically is never easy, and it is a rarity to know with complete certainty if any act is truly ethical. If we ban pesticides, we must ask whether that will increase cancer rates by increasing the cost of fruits and vegetables. If we buy free-range eggs, we never know for sure whether chickens raised outside, where mortality rates can be 25%, are happier than when raised in a barn where mortality rates are more like 5%. If we adopt no-

till farm practices to reduce soil erosion we must then deal with the fact that this will increase our reliance on pesticides.

Most of the time, we rely on our intuition for these decisions, as well as the claims of certain activists and businesses. Is organic food more environmentally-friendly? Many people intuitively say yes. Many people have heard environmentalists say it is. Are chickens happier in a cage-free than a cage setting? Many people intuitively say yes. Many have heard animal advocates say it is.

Sometimes however, our intuition is wrong, and we make unwise choices due to this *panoramic-blurriness*. For us to truly make ethical decisions we must sharpen our intuition by thinking very deeply about subjects, incorporating the scientific findings of scientists and the logic of economics, and widen the diversity of our information sources.

[Talking Points: Panoramic-blurriness can be brought into focus by diversifying our reading, incorporating scientific research and economic logic.]

To support this claim, this lecture will consider the issue of local foods and how local foods affect global warming and the local economy. We will take two notions many locavores intuitively believe.

1. Buying local food always benefits the local economy
2. Local food is associated with a smaller carbon footprint.

[Talking Points: Our reading will illustrate panoramic-blurriness with two topics in local food

Local foods and the local economy

Local foods and carbon footprints]

Our readings will show that although these two statements could be correct in some settings, they are certainly incorrect in other settings. Again, the objective is not to discourage you from taking a panoramic view of agriculture in your quest for ethical food, nor to convince you that you should not listen to the claims of locavore groups or local food sellers. The objective is to arm your intellect with the results of scientific studies and economic logic. A panoramic view of agriculture will always be blurry, but this panoramic-blurriness can be brought into greater focus by our diversifying your sources of information—something I hope this lecture accomplishes.