

## Evaluating the Economic Impacts of Local and Regional Food Systems: Best Practices Webinar Transcript

Rich Pirog: Hello. This is Rich Pirog. I'm the Senior Associate Director for the Michigan State University's Center for Regional Food Systems. I'd like to welcome you to this special webinar here on December 14th evaluating the economic impacts of local and regional food systems' best practices using the USDA AMS Toolkit. This webinar is sponsored by Michigan State University's Center for Regional Food Systems with funding from USDA AMS and the W.K. Kellogg Foundation. Just to give you a little background on the Center for Regional Food Systems, and I'll also explain why we're sponsoring this particular webinar, the center was started in 2012. Its mission is to develop regionally integrated, sustainable regional food systems. The Michigan Good Food Charter, which was established in 2010, is the foundation of framework for the Michigan work of the center. There are six goals around good food. When we talk about good food we talk about food that's healthy, fair, green and affordable for all Michiganders. Our work at the Center for Regional Food Systems includes the collaboration infrastructure around the Michigan Good Food Charter, food access and health, farm institution and farm to school, healthy food financing, most recently with a number of other partners the Michigan Good Food Fund, food hubs, particularly our work with the Michigan Food Hub Network which also started in 2012, food systems planning and food policy, organic production and marketing, beginning farmers, and also new work in city-region food systems in a global context. So the backstory--why is the Center for Regional Food Systems co-sponsoring this webinar for this particular toolkit with Dawn Thilmany and Becca Jablonski from Colorado State University? Well, the rationale for this stems from the center's work around the Michigan Good Food Charter, which starting in 2014 sort of in the second phase of this work to try to achieve the six goals around the Good Food Charter by 2020, we decided to take a collective impact approach. And part of that collective impact approach, and we talk about collective impact, there's five conditions with shared measurement as one of those five conditions. We felt we could build the collaboration infrastructure better across organizations if we had more energy and more synergy around shared measures across the goals of the charter. Many organizations in Michigan are already doing work on one or more of those six goals. So we started this project in the Fall of 2014 in shared measurement, and through our research we found that particularly the goals around the economics of local food which deal with the first three of these six goals you're looking at, and then the healthy food access goal were the ones that many of our Michigan partners were working on. It's not that goals five and six weren't important but that's where there was a lot of energy. And so through that work we've done surveys, we've had a number of discussions with our advisory committee working across a number of organizations in the state, we found that in order for us to have shared measurement type activities we needed to be able to sort of lift the literacy around healthy food



access and economic impacts of local food so that we could speak a more common language in the state. And so using the toolkit we engaged our colleagues at Colorado State University and some of their colleagues that work on the USDA AMS Toolkit project. We offered a basic economic indicator training in October. Sixty-five people in 26 organizations across the state of Michigan participated. We then had an advanced class of which 10 people from about four organizations participated. We're also developing some secondary data tools. And after offering this beginning workshop, and the advanced workshop, it became clear that other people in Michigan who weren't able to come to that initial session representing many organizations that weren't included and many organizations that were, we just had a limited number of people we could have at the workshop, they wanted to sort of have more information about just the basics of what that initial workshop in October was about. So Becca Jablonski and Dawn Thilmany agreed to work with us on this particular webinar. We also offered to open this up beyond Michigan's doors to other people around the country. So we're really glad to be able to co-sponsor this webinar with both Dawn and Becca. And I'll just very briefly share their backgrounds. Becca is a Special Assistant Professor of Food Systems and Regional Economics in the Department of Ag and Resource Economics at Colorado State. Her research focuses on understanding processes of rural regional development with an emphasis on the strategies to support entrepreneurship. And Becca holds a Ph.D. from Cornell University and has done some really cutting-edge on economic analysis of food hubs. Dawn Thilmany McFadden is a Professor of Agribusiness and is an Agribusiness Extension Economist with Colorado State. She's been in that role since 1997. She specializes in analyzing markets and consumer behavior in local, organic and other value-added food segments. She's published over 75 journal articles on consumer behavior, ag markets and food systems and presented similar material to over 200 extension audiences. So Dawn will do the first part and walk us through a bit more about how the USDA AMS Toolkit came to be. And then Becca will lead us through the core of what was the basic workshop that was provided here in Michigan.

Dawn Thilmany: This is all made possible because the USDA Ag Marketing Service had the vision to realize there was an increasing interest in not just food systems but try to do a set of evaluations about how food system innovations may affect different parts of society. We were the team they actually brought together to specifically look at economics. And without being able to spend the time to list all their names but you'll see I had a very rich team to draw on. So although we're reporting the outcome realize that this was a team effort of a lot of clever minds and some good teamwork to try to give you guys the best practices. And that's exactly what today is going to be about. The Ag Marketing Service gave us the pretty lofty charge of giving them a better insight and standardized approach that they could offer to their stakeholders and clientele to actually analysis what the economic implications of some of their investments might be. Obviously this is framed by the fact [inaudible] a really nice new set of resources and



initiatives that they've been able to give investments into communities with and their increasing capacity to offer some technical assistance to communities as well. And so, again, they wanted our insight as kind of the people out in the field who've been thinking hard about this for a while, about how they might best do that in partnership with land grants but also community leaders like many of you probably on the call. So when we first met as a team, we decided to kind of break this into modules. We're quite aware as the polls show that people are coming into this all the way from a beginner perspective to someone who's been doing a lot of economic impact evaluation, but perhaps not in this particular sector, or how to be really careful and weary about how food systems initiatives might look different. So the first four modules which I'll be covering quickly here today basically just even guides the process you would want to do to do an assessment. And a lot of you are very clever and savvy to the fact that when you're evaluating projects some of these things have to happen in all cases. We'll try to highlight mostly today how those processes might vary a bit when we're talking about food systems. And then Becca will continue on with some of the more in depth modules that are offered up and fully available online as PowerPoints now and there will be publications that start getting into the real technical aspects of when you're starting to put numbers to these economic implications. So the whole toolkit is available. And we realize you all might use it in parts but also might find [inaudible] the whole thing useful. The first thing that we really covered setting up Module 1 is that the reason food systems probably deserves its own little kind of a toolkit is because they're so diverse and so nebulous in a way and they're so [inaudible] in nature that although we can give you some rules of thumb and best practices they're all things where your community itself has to dictate how some of it is framed. So the first thing we urge in the toolkit is to assemble a very diverse project team that recognizes anything you say is part of your food system whether it's all the way back to water and land, all the way up to public health and consumer choices, however you're framing that food system, you need to have other team members that represent those stakeholders, establishing a realistic timeline, and we gave you one example at the bottom from a project that was done to allow people to start having an understanding of when they would be chiming in. And then also scoping that study appropriately. Once you have the diverse project team you can look at what all you're going to include, and because of maybe budget or time constraints, what you might not be able to include at least that first phase. Modules 2 and 3 I go through pretty quickly here. But we do have a fairly extensive discussion and list of first secondary data sources. Many of you might know some of these but I know I learned a lot that for different pockets of data you might need depending on how you scope this story they're all out there. But sometimes it's the navigation of finding them so we try to give a one-stop shop where we list all those, talk about some of their strengths and weaknesses, but then also do dive into what primary data is probably going to be at least partially necessary. Again, something this [inaudible]-based. It's very likely all the information you need to answer your questions won't be available. And we divide that discussion a little bit into both qualitative and quantitative methods you might use. We even gave some examples of some surveying and interview



methods that have been used by other communities. Module 4 we turn into a discussion of basically data interpretation. Sometimes we amass a lot of information, we might make a nice chart or a graph, but we really have to think hard about what we're going to let the data do for our team. And so we talk a little bit about what's commonly used which is comparative of benchmarking analysis. Comparative would be that a place in the country that maybe you want to be more like and emulate and compared to where their numbers are on access to healthy foods or land conserved for food production. Or if you see this being a long-term project for your community starting to do benchmarking. Where are we now? Where will we look like five years from now? All those are important things you might do but, again, this would be the point in the assessment when that conversation could probably come to life. And also where you can start talking about linkages across the system. Although the data's generally assembled in buckets once people see what the data looks like from maybe their core interest area you can start looking for some linkages about where there might be connections between some of the land issues along with the farmer issues, or farmers on the ground relative to what your supply chains look like. We do give some words of caution in the toolkit about what was correlation versus causality. Although you might see some clear connections we'll caution you that every difference you see across time or across places may not be significant but it's at least worth a good conversation. And then we'll even give some of you who aren't familiar with them some interpretations of how you might use spatial analysis techniques and give both some descriptions and some great examples of cluster mapping, location quotients and some other terminology that if nothing else you should be aware of. And it'd be great if you actually might have a chance to actually explore some of those methods in your assessment as well. And, again, I hope it was okay that I went through those quickly. We're trying to make up some time. But we will have questions at the end as well. For now I'd like to turn it over to Becca Jablonski who will do the remainder of this. Are you okay?

Becca Jablonski: Hi everybody. Just loosening this up. So Modules 5 through 7 really get a little bit more in depth and a little bit more technical. Modules 1 through 4, as Dawn sort of quickly explained, are meant for any person in the community, they don't necessarily need to have advanced economics training to do this kind of assessment. But once we actually move to Modules 5 through 7 we're looking for people who probably have a little bit more advanced understanding about economic development and concepts about economic impact. So when we talk about an economic impact assessment what are we talking about? So let's imagine that we have a grant that's coming from, let's say in this case, the federal government from the Farmer's Market Promotion Program and it's coming to support food hub development in your local community, however you define locally. So we have this let's just imagine a million dollars is coming in to support food hub development. That is called the "direct effect". Now in addition to the direct effect what happens is that food hub has to purchase input in order to produce its output, in order to have things to sell. It's going to purchase items from farmers, it's going to



purchase items from processors, it may rent vehicles or buy vehicles. It's going to purchase gas, it's going to purchase other utilities. Those pieces together are called the "indirect effect". And actually, the other piece that's part of the indirect effect that we don't actually map out here because it becomes so complex, is that in order to produce the products, for the farm to produce the product to sell to the food hub, it actually also has to purchase additional inputs. So now we have this really complex web of additional purchases that are happening because of that food hub, because that food hub exists. And those are all part of the indirect effects. In addition that food hub is going to actually hire employees. And those employees are going to be paid wages and to some extent those wages are going to be re-spent in the local economy also purchasing utilities, probably renting a home, purchasing childcare, purchasing groceries, etcetera. And those are called the "induced effects". And so when we're talking about actually calculating the local economic impact what we're talking about is the direct plus the indirect plus the induced effect. So we have a pretty complex story that we want to talk here that requires a lot of data in order to really understand what the impact is. So you know, as Dawn mentioned, we have complex linkages within the food system. Those linkages look different in every place. And we can measure the extent of those linkages using input-output analysis or a social accounting matrix model to generate these multipliers. Right? And I'm sure many of you are familiar with the concept of multipliers. This is the language that traditional economic developers really use a lot. And so just remembering that this economic multiplier is a single number that's going to capture those three effects--the direct plus the indirect plus induced. We in Module 4 try to clarify a few different terms. And this is really important because depending on what the goal of your community is depends on what you want to measure. So growth is a concept thinking about economic growth. It looks at the change over a period of time. The challenge with growth is that it doesn't necessarily tell you who is benefiting or what industry is benefiting with your economy. So you can have growth but it could all occur within one sector of the economy or with a particular business. Development in contrast relates to improvement relative to some starting condition or sustained progress towards a particular goal. So you may actually not experience economic growth in your local community, but you might find that support you're actually having meeting some economic development goals just supporting a small farmers or some other kind of stakeholder group that you're particularly interested in your local economy. Growth is relatively easy to measure. Development is much more nebulous. There's many different pieces of economic development, its multi-faceted concept. We don't spend a lot of time at this point in the toolkit talking about economic development. We try to make sure you understand what these different terms are, to communicate them to communities. This is an area we may go dive into in future iterations of the toolkit. When we're talking about impact, however, and this is really what the focus of the toolkit is, what we're talking about is a change that's associated with a specific event or shock. Now those events or shocks can be both positive or negative. And so a common negative shock might be a natural disaster, for example. And we can see how the economy is impacted by some kind of natural disaster. But there can also be a positive shock and in the case of what I showed you before





with the Local Food Promotion Program coming in, we assume that's a million dollar positive shock in your local community. When we talk about what the economic impacts are that result from local food system this is really a strategy that's focused around import substitution. So the concept is that if we purchase more of those goods locally with the food hub purchase more inputs locally compared to a similar kind of business that's doing the same amount of sales that the economy is going to see some kind of net gain from that. Because one of the things maybe I didn't emphasize enough when I showed you that food hub example is that it's only the purchases that are made in the local economy, again, however local is defined, that are going to contribute to local economic impact. And so the idea with import substitution is that as you have more of these products that are purchased locally you're going to actually strengthen the linkages that exist in your local economy. It's not just the food hub that's going to benefit but it's going to benefit all of those input supply businesses, and so on and so forth down the line. Those web linkages become important. So this is a really simple multiplier illustration that I think two members of the team, Steve Deller and David Hughes, put together. And the idea is that if you have a dollar's worth of sales from that food hub that food hub is going to spend part of that dollar in the local economy purchasing local inputs. So let's imagine in the first round of purchases you're going to have 40 cents that's spent on local purchases and 60 cents that's spent on non-local purchases. When we talk about import substitution what we're talking about is taking some of that 60 cents and putting it into the blue. So we're basically just reallocating the amount that would be spent outside of the local economy and we're moving it inside the local economy to understand what happens. And when we talk about the round-by-round spending that actually makes up this multiplier what we're looking at, again, is not those first rounds of spending what the food hub is purchasing, but that also what all of those input supply businesses are also purchasing. And it's those inputs again that stay at the local economy that contribute to local economic impact. So in this case the value of the multiplier based on all of those rounds of the blue are the direct plus the indirect plus induced effects. And in this example you see it's 1.66. And so this is a story that you can go and you can take to your local municipal officials. And we sort of talk a little bit about how to frame that in a way that may resonate. Remember though the multiplier is not directly related to growth or development, it's aimed at assessing impact. So understanding these definitions are very important. So as I mentioned the modeling method that most regional economists use to measure these economic impacts, or input-output analysis, or something else we call social accounting matrix models, and it just tracks the flows of transactions between local industries and the sales by industries to households and these other final users. Most analysts use a software and data tool called "IMPLAN" for their I-O analysis. And the reason for this is that IMPLAN provides data that contains a complete picture of the entire economy. As you can see from some of the things I mentioned the data needs for this kind of work are substantial. And so IMPLAN really makes this much easier for folks. It's real value added. There are some challenges and some augmenting that may need to happen but it's really, in my opinion, sort of the best source of the entire economy as a complete picture of the economy that we have. So



defining the study area is also very important, of course. Any of us who've worked in the world of food systems, local regional food systems, for a number of years know the challenges of defining local. This actually becomes very important when we're doing these impact assessments. The smaller the definition of local, the smaller your multiplier impacts are generally going to be. And this makes a lot of sense because if you think about the fact that we're measuring those local purchases in the economy you're going to have more purchases that happen in a broader swath of the economy than you're going to in a smaller area, just because there's more businesses in a bigger location than there are in a smaller location in general. But to be more rigorous in how you're doing this kind of assessment what you really want to think about is something called a "functional market area". That's how we generally talk about this. And this is really if you think about one of the ways we talk about this in our toolkit is where are the people on your team, where are the stakeholders coming from. That's generally how you want to define your local area. Where are the farms that are selling product into the markets? Where do the customers live? Where do the workers live? That's really going to define your functional market area and that's really something you want to think about. You know often times we do define local-based on data availability. Within IMPLAN you can get data by zip code and congressional district. We don't recommend going to that level. Generally going to the county or state level makes more sense. But really thinking about this functional economic area is what you want to focus on it in general. So, again, a bigger study area is not always better if we're trying to do rigorous economic impact assessments to really understand what the economic impact of the shock is. So we just want to think carefully about what to include and what shouldn't. And then reasonable size of multipliers. We've all seen studies out there [inaudible], you know these huge multipliers that are going to show multipliers of four. When I see a multiplier over two I really start to question the study. There has to be a really strong reason why you're going to have a multiplier over two. In general, smaller rural areas are going to have a smaller multipliers than larger urban areas. And, of course, again, this makes sense. There's more businesses you can purchase inputs from in an urban area. So when you're using these multipliers to try to make a decision you don't want to just say, "Well, we want to maximize the multiplier." There may be tradeoffs in thinking about the multiplier. You may be looking for an initiative that's actually going to support rural economic development per se. And that's really where you want to bring in these other concepts of economic development as well. So this is a nice illustration of that. The stronger the economic linkage is, so the more businesses that exist and the more businesses that purchase from each other, the larger the economy, the larger the multipliers are going to be. There are challenges with input-output analysis in IMPLAN then these are things that you really need to take into account when thinking about is I-O and IMPLAN an appropriate tool to use for your kind of assessment that the assessment that you're doing. And you want to make sure that you provide caveats whenever you're presenting the story because, of course, we're always making assumptions and we want to be transparent about those assumptions. So we have constant or fixed relationships among industries, so that basically what it's saying is that supply



is always going to equal demand. Well, we know that in some places that's not true. And so we want to think about what these relationships are and is the kind of shock that we're implementing is really tenable given what our current economy actually looks like. So if your local foods production or region doubles so too will its demand. Well, this may or may not be possible and, again, this goes back to some of the earlier modules that Dawn was talking about why having a group that's guiding the assessment is really important because they can speak to the fact of whether or not these exceptions are actually tenable. So Modules 6 and 7 get even more technical. This is not framed in the same way that the toolkit actually frames Modules 6 and 7, but we thought that at least for a sort of short webinar that this would be a good way to do it. 6 and 7 really focus about what is a good study, what are the things that are important to consider if you want to do a rigorous assessment. And there's two main components here. One is that using good data and the second is using sound assumptions. These assumptions are going to make a big difference, using good data is going to make a big difference. And what do we mean by good data? Well, we might need to adapt our input-output model, or the data that IMPLAN provides if you're going to use IMPLAN. And there are reasons for this. First there is evidence that farmers and value-added businesses that are participating in these local food system initiatives interact differently with the local economy than more commodity-oriented businesses. And by definition this really makes sense. A food hub or one of these sort of value chain businesses by definition is trying to purchase more from the local economy than would equivalent kind of business in general. So food hubs by definition are trying to support small local food partners. Right? So whether that's processors in the area or farmers in the area. So by definition they're likely purchasing more of those inputs locally, and capturing those additional local purchases is important. Another example of the farm gauge is to think about intuitively why the local food system producers may have different expenditure patterns. Here are two images of two tomato producers. So one is a larger-scale tomato producer that's out in California. Now you can that they're operating in a scale such that they can purchase additional technology. Right? They can have machinery and it probably means that they need less labor per dollar of output. This is not at all a value judgement. This is just talking about the different inputs required to produce one unit of output per dollar of sales. On the right hand side here we see what is likely a smaller-scale operation, and what they're doing is they're doing more hand harvesting. Right? Maybe they're not operating in a scale where they can actually purchase the kind of equipment that we see on the left. And it's not just at the farm level itself, but if you think about that farms that are selling through these local and regional markets post-farmgate are taking on additional supply chain functions doing more of their own marketing, processing and distribution in general. A tomato grower, for example, that's selling at farmer's markets is going to require additional labor to actually sell those products at the farmer's market than would a more commodity-oriented grower that probably is taking the tomatoes that they've harvested and taking them to a processor or a terminal market for sale. So you can see that really thinking about the roles that these different food systems businesses play in the local economy is going to make a big difference in the types of input





they require, and potentially where they're purchasing those inputs. This is some work that Dawn and then another co-author Allie Bowman [assumed spelling] and I have been doing using the US Department of Agriculture's Agricultural Resource Management Survey data. The USDA ARMS data is the best source of farm financial information that we have at a federal level. So this a nationally-representative sample of farmers in the United States. In 2008 the ARMS started collecting information about farms by market channel. So they started asking questions about whether or not farms were selling through local food markets, which they can define initially direct to consumer but now also include intermediated sales as part of that definition. And the big thing we want to draw your attention to here is that on that top bar those are all of the farms across the United States that are not selling through local markets, so they're direct to consumer or intermediated markets. And that second bar showing you the farms that do. And what we can see if you look at that brown piece of the bar we see that those farms that are participating in those locally-oriented markets are spending much more as a percentage of total output, excuse me, as percentage of total expenditure on labor. Right? And this makes sense. So capturing that additional labor expenditure is important to include in these economic impact assessments. So we've talked about the IMPLAN data, it's coming primarily from national sources, and IMPLAN devised the entire economy right now into 536 sectors. There's 14 of those sectors that are directly related to agricultural sectors, but the most disaggregated of those sectors are something like fruit farming. So where at that fruit farming sector probably fairly accurately is going to capture those larger-scale growers, the growers that contribute more on a total sales basis to fruit farming in your local economy. It may not capture as well those farms that represent a smaller portion of that sector that are participating in the local and regional food system market channels. And so in order to really think about using good data in these assessments we really need to augment the IMPLAN data with data that we're going to collect from producers who are participating in new local operational markets. And I'm sure many of you know who are working directly with these producers it is very difficult to get this kind of information, you can't collect this information via surveys unless, at least in the experience that both Dawn and I have had, you really need to have relationships with growers and, if at all possible, you want to go and do interviews. And remember, what you're looking for here is to understand representative expenditure patterns of these producers. So a convenient sample which we talk a lot about, you know, what a convenient sample is in Module 3, those generally are not going to be adequate. And so you really want to think about do you have the resources to do this kind of rigorous economic impact assessment, and if not a different project that both Dawn and I are working on with some collaborators at Oklahoma State is trying to develop some benchmarks for these kinds of producers. I don't mean to overwhelm everybody here with the numbers up on the screen. I just want to show you some evidence from some work that Todd Schmit, David Kaye and I did in New York State looking at the differential expenditure patterns of farms that are selling through food hubs compared to what's in the IMPLAN data. So the IMPLAN data is that column on the left and the information we collected from these food hub farms on the right.



And what you can see from this is not only are there different expenditure patterns for these food hub farm producers, but also that they're spending more money per dollar of output in the local economy, and that indeed that does have a low economic impact. The last thing I wanted to cover here is this idea of sound assumptions. You know that there are finite resources and they're finite resources in terms of land, in terms of consumer dollars, public dollars so every decision involves a choice. Funding for program A means that there may not be funding for program B. And so we really want to think about when we're doing these economic impact assessments incorporating the net rather than the gross impact of the local or regional food system change. Now thinking about the impact of finite resources it can have an impact of both the supply, so the production the farm [inaudible] side, or the demand, the consumer side, or both. So when we're talking about the supply side we can talk about this as the no resource constraint assumption. So the idea is that is if there are gains in local food production they may come against the shift which we talk about as a countervailing effect and I'll talk about this more in a second. The other shift that might happen is in terms of opportunity cost of spending assumption on the demand side and we'll get into this in one second. So this is a nice study that Dave Swenson did at Iowa State. And really what he was looking at here is trying to understand saying that these Midwestern cities and major cities in the Midwest purchased more local food. How would the Midwest farmers respond to that? What kind of per-acre requirements would that be and then what would that actually look like? And what he found is that there actually has to be a shift in the acres because right now [inaudible] land, land that's suitable for fruit and vegetable production, is already in production largely in corn or soy. And so if we're trying to increase fruit and vegetable production, which is largely what local food is, it means there's going to be a shift out of corn production, for example. Now we also found is that because yields are much higher on a per-acre basis for fruit and vegetable you're not talking about a one-to-one shift. So not talking about one acre required fruit vegetable means one acre lost to corn. But it means that there's a shift that needs to take place. And if you talk about all of the additional fruit and vegetable production and then what that output would be and the total sales would be as a direct effect when you're doing your economic impact assessment, you're really missing part of what also has to occur at the same time which is the substitution out of this farm production. There's already value in the local economy that results from those corn sales and so we have to subtract that from our economic impact assessment or you're really not doing a rigorous assessment. The other piece to that is really thinking about opportunity costs. And so this requires information about the extent to which increased consumer purchases of locally-grown food effects other types of food purchases. And so one example of this the first study that was published in this area, at least to my knowledge, was by David Hughes and basically it said that if we had increased sales at farmer's markets we're going to have a decrease in sales in the current grocery stores. Now that was sort of a hypothetical. There wasn't actually data collected to show that, but the point is really important. That just because we have additional sales that are occurring in these local or regional food markets doesn't mean that now customers are spending more money overall in thinking about



their household food expenditure, rather there's probably a shift in expenditure that happens other places that needs to be taken into account. This is also from the study that Todd Schmit, David Kay and I did at Cornell, and so we did this study looking at the economic impact of a food hub in New York State. And what we did is we surveyed the customers that were associated with this food hub, over 300 of the food hub's customers, and we asked them whether or not they were purchasing less from other sources due to the purchases from this food hub. Indeed 50% recorded that they were purchasing less from other sources. We asked them to quantify what this reduction was, and as a result we found that our multiplier actually decreased by over 10%. And this is a very narrow way that we've been looking at opportunity cost. It's the first study to my knowledge to actually try to do this empirically, but so thinking more about what the opportunity costs are are really important. Likewise, this is a study that Louanne Lohr and Adam Diamond did in 2011 from the USDA Ag Marketing Service. And what they saw here is that in certain parts of the country there is high competition for vendors at farmer's markets. So if we take these red areas where there's already high competition for vendors, and we put in new markets in those areas, one possibility is that those farmers that are selling into those markets are going to increase their output capacity, but another possibility is that they're going to pull out of their existing markets in favor of different kinds of markets. And so really what is the overall net impact that have created new markets in those areas? Thinking these ideas through is really important in general. Thinking about appropriate intervention, and thinking about what the economic impacts are. We know that for people working in the field, for industry groups that coming up with the large-small supplier possible is always going to be desired because it helps to tell the story. And we certainly understand that. But part of what we're trying to do with this toolkit is to show some best practices, to talk about why you may not come up with this really large multiplier, and why you might have more modest multiplier-- Expect to see. And we think of this as a valuable practice for a number of reasons. One having a standardized approach across the state or the country is going to help us to be able to tell the story much better about what are the economic impacts of the food system initiatives really. Is this having the desired effect that we all think or might want to see? And also we're going to see good examples of how opportunity cost adjustments can be incorporated, and this may help us think more rigorously about the kinds of interventions. So, for example, for food hubs what it might show us is that because we know there's opportunity costs there instead of investing in bricks and mortar in all cases maybe what we want to do is incentivize existing distributors to work more with the local producers, and that that's going to help us reduce or minimize opportunity costs. And then also by doing these kinds of rigorous assessments we're going to be able to learn more from these previous research that have been done, and I think in a more honest and transparent kind of way. So that was sort of the quick and dirty of what we're doing. We've put up some information on our website which is [localfoodeconomics.com](http://localfoodeconomics.com). We hope that you go and visit the website. What we have there right now are PowerPoints for each of the modules that are fairly in depth. We just heard from AMS so I think we've been mostly approved for the toolkit to be officially released. And I think it's



going to be officially released in January. Dawn's shaking her head even though you can't see it. But for now please go to the website and look at it. We have some case studies there talking about some assessments that we think have done a nice job. We also encourage you to add your own case studies that are on there. You'll see under the resources link, under the resources area at the top, there's a place where you can actually go and add your case study. We also have a listserv that we're starting to get off the ground that's really focused on understanding economics around local and regional food systems. And also there's a place under the resources tab that if your community wants to have some kind of training we do have some resources through the US Department of Agriculture's Agricultural Marketing Service to come and do trainings. So if that's something that would be of use to you or your community please go on the website and fill that out for us. And without further ado I guess we're going to open it to the group for questions. I'm going to put this on both of us so Dawn can answer as well.

Dawn Thilmany: well, so and the one thing I wanted to say because we had a little technical difficulty we went very quickly and we realize that, is really the take-home message from this is that you've all probably heard the term IMPLAN if you're not playing in it already, and for all of the discussion we just gave about how it needs to be changed, rebuilt and so forth to reflect the local economy, it is the best big fuzzy picture of how economic sectors and are related across the country. So it's a great starting point. But we all know, everyone on this call probably has a passion for local foods, every little system throughout the country has something unique about it, and because that picture IMPLAN drew has to be based on averages, we're just trying to give you guidelines and steps of how you can best customize it to reflect what your community really looks like, your partners look like, your businesses look like, and there's even a little bit of Econ 101 here. We hope you actually start thinking hard about how your community's economy interacts with each other. And so some of this just needs to really bridge discussions among assessment teams about how your [inaudible] is put together in your community. And, again, IMPLAN really gets you quite a ways there. We're just encouraging you as you rethink what it really looks like where you are do it as carefully and thoughtfully as possible, and follow the examples of other communities who've done that thoughtful planning. So I hope this was useful, and even if the [inaudible] either not too far or not far enough you've probably picked up a couple nuggets that you can think about as you move forward in your own efforts. Okay, so we're getting some questions. We've been answering some of them by text, but now that we have time we'll try to field a couple of them here live. Patrick asks, "Is the tool within the toolkit that assesses the impact an ag production and processing in the global economy?" [inaudible] towards export, that depends. We think because on national average we have one of the biggest exporting sectors in agriculture, but that IMPLAN assumption is that a similarly large chunk out of any one local economy is export oriented as well. And, again, that's why we say if you know your community is not average



that's where that primary data and rebuilding that to better reflect what your stakeholders in the community tells you what is real for your community will want to happen because, again, IMPLAN is based on national averages, and on average we're one of the big net exporting sectors in agriculture. So it is something that for sure will be in there at baseline, but you have the ability to change and customize for your community.

Becca Jablonski: So and Monica asked, "Is it possible to breakdown this model to a smaller scale? For example, could students use the formulas modules provided to do a basic economic impact of a school farmer's market?" So, yes, absolutely. And as you can see even from just the one example of the food hub that I was mentioning if you have money coming in from the USDA to support food hub development, it's going to be the same kind of process, the same type of information that you're going to need to think about any kind of food system intervention. And so absolutely we hope we provided some information to do that. And then her second question, "Is there any kind of curriculum provided for six to eighth graders or nine through 12th grade students to understand economic impact through food systems or local procurement?" No, unfortunately, this is really not geared towards that age group. This is really meant, especially Modules 5 through 7, are really meant for folks who have advanced economic training of some sort. And I would say that Modules 1 through 4 could be meant for anyone in your community, but I would say generally speaking they're people who are [inaudible].

Dawn Thilmany: But it's interesting my daughter is taking AP Human Geo and they cover import substitution in that now in high school. And so there was a really interesting discussion with her and they had me come speak in their class because really some of what the local foods effort is not that we really want to get rid of imports, I like my chocolate and coffee and pineapple, but that some import substitution might make a community more resilient both here and in developing countries. So I think the flavor of this discussion are certainly entering a curriculum but, again, this is a little bit too refined. We have one more question from Chris on, "Are you encouraging using IMPLAN for economic impact analysis?" I don't know if encourage is right. We, as a team, we got together, looked at what was common practice and because the most common practice we could all agree on, since we couldn't go 20 directions, was that IMPLAN was being used not just [inaudible] impact analyses but a lot of sectors. And so often since we want to be comparing apples to apples we thought we should start there. It is a large learning curve, but it is a far smaller learning curve than some of the alternatives. You could build your own [inaudible] model. I guarantee that's not fun or easy. So really we felt this was the best starting point for what would be the most common to other economic impact analyses that developers might be comparing this to. But it does have a learning curve. One thing, IMPLAN might be actually on this call, they have been coming to some of our events, and





they're actually possibly looking at developing wizards for the front end of their program, but now that we've picked up the three, four, five places where you might want to customize most often, where it might lead you through those questions and actually do some of that customization. I don't know what kind of timeline we're looking at. But the more interest some of you show that that's something [inaudible] would buy and invest in to forego learning all of this, all the mechanics of doing it, I think they're actually very open to that concept because they do get so many requests.

Becca Jablonski: And I just wanted to add to that. There are two things, so there are other options out there. So there's something called "[inaudible] 2". What happened was in 2008 we lost, we as a federal government, stopped continuing some of what they were producing, some of the data sources that they were producing, and so it made it more difficult, and IMPLAN was what was sort of continued and what was continued to be available. It was used to understand the economic impacts of the American Recovery and Reinvestment Act, so that's a pretty good sign of endorsement from the federal government. The IMPLAN data was actually started to be compiled and created through the US Forest Service. It's something that the government has invested a lot of resources in over the years. One of our goals through this toolkit is that even if you're not going to do the economic impact assessment yourself, and you're going to need to hire a consultant, that this toolkit is something you could bring to a consultant and say, "Look, we understand that this is what the US Department of Agriculture Ag Marketing is saying is best practices for doing this kind of economic impact assessment." You can then very carefully craft your call for proposals so that hopefully you know exactly what you're getting and you know how to actually read this assessment so that it's not just sort of this black box that you're provided. And so that you can cut down on some of the time that might be required from a consultant to figure out sort of best practice methodology.

Dawn Thilmany: We got one question from Lydia about, "Is local retail linkage data available already anywhere?" There are approximations of those location [inaudible] as a concept we threw out there and described more in the toolkit. But that is approximated in IMPLAN already. Again, we would say it's probably not pitch perfect and at any time you could refine it. And, again, we talked about producers of businesses being really resistant to surveys, but what we have found is that if we tell them this is the national average, are you higher or lower than that, they'll sometimes help you calibrate it to be closer to what your industry is. So there is information there but we would highly recommend it be truth in your community. I'll let Becca cover a couple of these other questions.

Becca Jablonski: Yeah, and I just want to say one other thing about the retail linkages, you



have to be really careful with retail linkages. I don't have time to go into this now but you should look up a term called "marginizing". Because what happens is the retailers don't really produce anything. What they're doing is essentially in this kind of terminology adding value to what has been produced. So actually understanding those linkages is a little bit more complex than one might think. If you have questions about that just e-mail me directly, or post a question about it, but that's actually really an important point. I guess we have time for one more question here. Is that okay? One more question?

Dawn Thilmany: Is that OK, Rich? One more?

Rich Pirog: Yes.

Becca Jablonski: Okay, let's see so Erin said, "I am new to impact assessments, I am not an economist, however, I recently conducted an impact assessment that did not use the multiplier effect at all, but rather used a propensity score matching approach to quantify impact and to specific impact indicators. Do you see a method alongside this methodology outlined here?" Yeah, I mean, absolutely. We haven't talked about adding something like that to the toolkit but we certainly could.

Dawn Thilmany: And those are exactly the reasons we made the ability on the website we have up for you to register and submit it. And then we might ask you to craft it more into a case study so there's a quick synopsis of what you did with a link to the whole study, but that's exactly what we want to see over the next year that we continue doing trainings on this is all these best practices from the communities we did not see a ripple up and be shared so when people find out the better fit method for your community that you use that.

Becca Jablonski: Great. Well, I think our time's up and maybe Rich is going to say this, but I'm going to stick up a poll right now, and if you don't mind if you could take a minute and fill this out before you get off we would really appreciate it. So thank you very much for your time today. We enjoyed this and hope to have an opportunity to speak to many of you in person as we sort of go around the country and talk more in depth about this toolkit.

Dawn Thilmany: And the website does have an updated calendar of places that this will be presented, probably almost always in more detail, this is about the shortest presentation we give. So keep an eye on our calendar. Things are already posted and as we present around the country that will be posted as well. And please if you see someone from USDA Ag Marketing Service thank them for the investment they made to put this together. We all learned



a ton. And thank you to Michigan State University for providing the leadership to start getting the word out that we are all in this together and want to learn from each other.

Rich Pirog: Thank you both Becca and Dawn. This is Rich Pirog, again, with the Center for Regional Food Systems. Again, we very much appreciate the expertise they've provided. We apologize for some of the earlier technical difficulties. We were able to record 95% of the webinar, so the webinar, for those folks that may have come on late, the webinar will be available. And Dawn and Becca I think I saw you answer a question that you will allow a PDF version of the slides to be available as well?

Becca Jablonski: Of course.

Rich Pirog: So you can look for those available soon. And we'll be sharing that with Becca and Dawn for them to also put on the Local Food Economics Toolkit site as well. So, on behalf of Dawn and Becca and their team, and USDA and Colorado State University, and the Center for Regional Food Systems at Michigan State, we really thank you for participating in this very special webinar on economics of local food. So thank you very much to all. And hope everyone has a meaningful holiday.

