Weight of the Nation:
CDC's Inaugural Conference on Obesity Prevention and Control
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Nexus Between Food Systems and Obesity Prevention

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MS. HADDIX: I think that it's been an extremely exciting day, and I've been thrilled at the breadth that this conference has taken. Because if we're going to tackle this problem, the problem of obesity in America, and if we're going to go beyond that, we're going to have to tackle every single system we have in place in this country. And when you get to the food system, it becomes incredibly complicated.

So, first, I mean, I've been sitting in a couple of concurrent sessions this morning, and people in those sessions asked how many were public health people, how many were from other sectors. So, I'm going to ask you another one. How many of you are from agriculture sector? All right. I'm trying to see through the lights. Anyone else? Oh, a couple back there. That's great. I'm that there's at least some folks here.

And, first of all, I introduced myself. I'm Ann Haddix, and I'm the chief policy officer for CDC. But to tell you the truth, I didn't get my -- I didn't start my career in public health. I started it in the agricultural sector. I mean, actually, I started very young in the agricultural sector because I'm a farm kid. So -- and I'm an agricultural economist by training, and I started out my career in agriculture working as a legislative aide working on the farm bill. And I'm not going to tell you which farm bill that was, but I did, and it was a very different conversation. And believe me, if you think there was any mention of health in the farm bill, there wasn't. Actually, it was -- when I started working on the farm bill, most of the conversation was around under-nutrition in school children and a good use for excess commodities that farmers were producing to make sure that kids got an extra meal during the day, kids who weren't getting enough food at all. Boy, how far have we've come.

So -- and I think that that's a very good lesson for me having been around for a while and watching how the farm bill, which some would now like to call the food bill, how it has evolved over time. And it is so important that, when we talk about our food systems, that we recognize that the policies that we're tinkering with aren't just food policies.

They are policies that affect the working-day lives of millions of Americans who work in the agricultural sector whether they are the farmer, whether they are the farm worker, whether they are the farm processor. They are policies that affect the basic environmental quality of our country. They are policies that are intertwined with our energy policy. They are policies that are intertwined with our foreign assistance policy and the food security of countries who are struggling to find a place -- an economic position in this world. And it's so complex that every time tinker one way with one policy, if you're not aware of the other policies and impacts that yours can have, you can tend to send things askew.

We originally passed the Agricultural Adjustment Act because of a growing economic depression in this country that was causing rural people to flee from the rural settings into urban environments that was causing widespread malnutrition. And we passed the set policies to keep people -- keep them down on the farm, to keep them at home, and keep them employed and to fuel a supply of commodities that would solve a widespread malnutrition, under-nutrition problem. And, boy, did we do a good job.

It's time to change. We've known it's been time to change for a long time. People who look at this from the perspective of health have known it's been time to change for a long time. But other interests are out there. They are the interests of the agricultural sector. They are the interest keeping small farmers on the farm. They are the interest of keeping the family farmer on the farm. And we have to try and find solutions that meet the needs of all of the various parties. It's probably -- passing new farm policy is probably as challenging as passing health reform.

So, what we're going to talk about today in this panel is a little bit of the complexity around that. We're going to look at it from both the supply side -- we have two panelists who are going to talk about this from the supply side. And we have two panelists who are going to talk about it a little bit from the demand side and are going to offer some perspectives on how we can look at this and how we can find some solutions for going forward.

And at the end of that, I'm going to ask a couple of questions, maybe tough questions. I'm an agricultural -- I'm an economist. That's what we do. We ask the tough questions and provide absolutely no answers at all, or at least an answer that might want to hear. And if you ask any one of us, we're likely to provide you with a different answer so you can pick and choose.

But what we're going -- I'm going to ask a couple of questions. But then I also hope that those of you in the audience will get up and ask questions.

For many of you, agricultural policy and food policy is a very different approach to dealing with the obesity problem. So, don't feel shy. We don't expect you to know how to grow rutabagas in this room. But get up and ask.

How many of you have ever had that "I want to be a farmer" fantasy? Oh, come -- see. I knew it. I knew it. It's all there really deep inside. So, don't feel dumb. I want you to ask questions as basic as they might be.

Okay. Let me introduce our panelists first. And what -- I'm going to ask them to come up one after the other, and I'm not going to pop up in between times. And we'll let them get on with it, and then we can have a discussion.

Our first panelist is going to be Dan Imhoff. He is the author of "Food Fight." How many people have read "Food Fight"? Oh, good. See, some of you already know all kinds of things about the farm bill. That's great. And he's going -- What he's going to do for us is really give us that big what is food perspective. What is food? Where does it come from? How do we monkey around with what we get? Is that a fair assessment, Dan?

MR. IMHOFF: Yeah.

MS. HADDIX: Okay. Our second panelist is Patricia Farnese, who I'm very excited to hear her talk because I know a whole lot about agricultural policy in the U.S., but I know very little about food systems in Canada. She's from the University of -- She's a professor at the University of Saskatchewan. She -- Her focus is on food systems, and she is going to talk a little bit about solutions in farming systems to try and meet our needs around our food supply.

Our third speaker is Jay Hirschman. He's going to -- He's with the USDA. He's a special nutrition staff in the Office of Analysis. This sounds like you're an agricultural economist. Is that true? See, he's a public health person doing ag econ, and I'm an ag economist doing public health. Go figure. So -- but that's that kind of cross-pollination they talk about.

But he is at the USDA and specializes in the nutrition programs there, and specifically, he's going to talk about the School Lunch Program.

And our final speaker is going to be Kelly Brownell. Dr. Brownell is the director of the Rudd Center for Food Policy and Obesity at Yale. And he is going to talk to us somewhat today on possible ways that we tinker around with things like taxes and stuff like that related to how we effect what consumers choose. And he and my new boss, Dr. Tom Frieden, just recently co-

authored an article in the New England Journal on the use of taxes and to discourage the consumption of certain food products.

So, with that, I'm going to sit down. I'm going to let Dan get up here. We're going to have an exciting panel. They're each going to talk about six to eight minutes so that we have plenty of time for conversation.

MR. IMHOFF: Thank you very much. It's an honor to be here. And it was so impressive to be in the room this morning and all day long.

I'm charged with making a few points about the food system and the weight of the nation. I'll try to make some brief policy recommendations along the way.

The one thing that I would really like for you to bring home, if anything, from this talk is that I believe we need to see obesity as a byproduct of an industrial food system, an industrial food system that's out of balance. And it goes along with other like water contamination, soil erosion, the decline of rural communities, declining energy reserves, climate change. So, in many ways, in my feeling, obesity starts in the fields.

Wendell Berry has written that there is no connection between food and health. People are fed by a food industry which pays no attention to health, and they're healed by a health industry that pays no attention to food. But, you know, the anthropologists have long studied food systems as a way in to a society. We saw this graphic from the economist this morning that we've gone from Neanderthal to Big Gulp man.

But these changes in behavior in our food system, they -- they didn't come about by accident as Ann said, and they may have been well intentioned. But now, as we look at the food system and obesity, we have to shine a bright light on USDA Farm Bill subsidies, these massive omnibus programs that are passed every five to seven years, and they cover everything from nutrition to agriculture. But importantly, they function as a great economic engine of our current food system.

Until the last farm bill, over 80 percent of all crop support went to just five crops: Corn, cotton, wheat, rice, and soybeans. Payments went out to the --increasingly go out to the largest growers and increasingly geographically concentrated so we have an industrialized food system.

Corn gets the lion's share. Corn production alone is at 90 million acres. That's roughly the size of Montana, the fourth largest state. And by contrast to the 90 million acres, we grow only 230,000 acres of fresh market corn; that is, the corn that we actually eat off the cob. In fact, in farm bill terms, fruits, vegetables, and nuts, the foods that we're supposed to eat five or more servings of per day, according to our nutritional guidelines, are known as specialty crops. Fruit and vegetable growers finally receive some support in the 2008 farm bill, but they remain a relatively small percentage agricultural output.

And so if anything that we could do policy wise, I do believe that we could align our Federal agricultural goals and supports with our health and dietary priorities, or at least we can even the playing field.

And the health community could have been a lot more vocal in the outcome of the last farm bill. So, I just leave it out there that in 2002, we will have another farm bill. And so it should be something that everybody has their sights set on.

Here is a simplified version of how the system works. We put out, you know, between $10 and $25 billion dollars per year to maximize this production of commodity crops. To produce this huge amount of corn it takes a lot of fossil fuel, fertilizer, and chemical to grow it. And then what do we do with it? Well, increasing, we feed it to cattle. In massive confinement facilities, we slaughter 10 billion food animals each year in the United States alone. That doesn't include fish. And it creates a food system that's flooded with energy dense animal products higher in saturated fats and cholesterol than animals that are raised on pasture more slowly, which are high in Omega-3 fatty acids and other critical nutrients. These animals are raised in mind-

numbing concentrations, a hundred thousand cows on a feed lot, one to two thousand hogs in a single windowless building, thirty to forty thousand broiler chickens in a windowless shed. And these are just components of these massive operations. The densities of these animals are supported by routine applications of antibiotics, 25 million pounds per year or 70 percent of all the antibiotic medicines that we use in the United States.

So, if we're concerned about nutrition and obesity, clearly, we should be looking at other types of food systems and types of food production.

Other places that this subsidized corn goes is it ends up as cheap ingredients, and not the most calories in our food outlets, and also as key ingredients in our school lunch programs.

In the end, what we end up with is a long-distance, high-energy food system at work. Family farms become mega farms. We lose younger people who might become our next generations of food providers. We produce so much corn that we can't eat it all. It's shipped to other countries whose farmers can't compete with our subsidized production.

So, they must leave their land in search of other ways to feed themselves. We put it in our gas tanks. Our specialized commodity farming regions become virtual food deserts, producing commodities but not much food that can be eaten. So, fruits and vegetables are shipped in from around the country and increasingly from other parts of the world where labor is cheaper.

The enormous amount of waste produced in these animal factories overwhelming. It's 500 million tons per year according to the EPA, almost two tons per person. And this is a different kind of obesity crises. This is obscene amounts of untreated waste, which becomes a public health hazard rather than a source of soil fertility. We spread the manure on farms. We transport it a great distance to get rid of it. We even feed it back to livestock as cheap weight gaining additives, but it's not all containable, neither are the fertilizers and pesticides used to grow that grain. They contribute to annual hypoxic zones or dead zones in important water bodies like the Gulf of Mexico or the Chesapeake Bay or hundreds of other places around the planet.

Subsidies were supposed to design to keep foods cheap, and they did. We saw this slide this morning that, over a 15-year period, we watched the cost of fresh fruits and vegetables go up 40 percent while the cost of foods, unhealthy foods, depending on subsidized commodity ingredients fell much as 20 percent. This is a time when we saw our farm bill subsidies escalate and also a time when we saw adult and childhood obesity and overweight on the rise.

Even our trashcans are overweight. Each person in the United States is responsible for 800 pounds of packaging per year of which nearly 500 pounds is for food and beverages.

A final troubling sign of our industrial food system out of balance is a rise in colony collapse disorder in which our bees just fail to return to their hives. We've lost at least 50 percent of commercial honeybees in the last three years.

Why is this important to the obesity discussion? Well, one out of every three bites of food requires some form of insect pollination. And without pollinators, we could have a diet quite different without cherries, almonds, cucumbers, pumpkins, pears, apples, melons, citrus, all these things that we want for healthy, balanced diet.

For a long time, we've been approaching the subject of nutrition by asking what we need as a species. And, perhaps, we've gotten way too good at meeting those needs, and it's time to ask new questions. Perhaps the more appropriate question is, what do we need to have healthy agricultural ecosystems and then adjust our diets accordingly. It does not mean we won't have animals on the landscape, but animals will be dispersed appropriately.

Our national subsidies and food policies can be used to lead the change with supports for pasture raised products with investments in revitalized regional food production systems across the country. It will take all that and more to link the health of the body to the health of the land. But in doing so, food becomes an engine for healing, healthy food as a down payment on both preventive healthcare as well as a healthy planet. And I leave these words -- I leave you

with these words from Sir Albert Howard who said, "The whole problem of health in soil, plant, animal, and man is one great subject." Thank you.

(Applause)

MS. FARNESE: Let me too thank the organizers for being here. And I just have to say I'm quite perplexed by this obesity problem having spent Saturday and Sunday chucking around in that heat to all your national monuments. And I think I lost 10 pounds. So, I'm not quite sure why you have that problem here. But anyway...

Agriculture is an easy target when searching for environmental causes of obesity. And we've talked already -- we've heard a lot of people talk about the role of commodity policy and that linkage between commodity policy and obesity. And we've heard one side of that debate, and I just wanted to draw your attention to the fact that there's some literature out there and quite compelling literature suggesting that commodity policy doesn't have a role in getting us out of the obesity debate.

And while I don't want to focus too much on that debate, I do want to say that the detractors rely on an economic analysis of the effect of direct farmer support on the retail price of food. And given that less than 20 percent of the consumer food dollar actually reaches the farmer, it's not surprising that for the most part, a complete abandonment of bulk commodities support will not decrease retail food prices enough to influence consumer choice. This conclusion appears to support those who say changing U.S. commodity policy is not an effective strategy to combat obesity.

I assert, however, that focusing on the retail consumer producer link is unhealthful given the nature of our food system. The analysis should be focused on the processing sector given the dominant role they play in shaping the American diet. This is dominated by a relatively few players who may be able to exploit their economies of scale to such an extent that even a negligible change in commodity price may have a significant impact on their bottom line.

So, before we dismiss the important role commodity policy has on obesity, I think more analysis is needed to determine the impact of this policy on processor behavior. And I haven't seen much analysis that way.

But I want to turn from commodity policy, and I want to spend the rest of the time that I have today on the overlooked rule of fruit and vegetable policy on obesity. We know that a majority of Americans, as well as Canadians, are not eating the daily recommended amounts of fruits and vegetables. If they were, a 2006 USDA report indicates that an additional 12-and-a-half-million acres of fruit and vegetable production would be needed. We also know that fruits and vegetables often cost more than less nutritious choices. And we've seen lots of statistics about that today

So, what does this tell us? We need more people growing more fruits and vegetables to combat obesity. Pretty simple. Increased production will lower prices leading to increased demand, and increased production will ensure that we have the means to meet that demand.

But in order for this to be a viable agricultural policy, lower prices cannot come at the farmer's expense. When you consider that Americans spend less than 10 percent of their disposable income on food and only 20 percent of that 10 percent actually reaches the farmer, there is little room to squeeze a price decrease from farmers.

Therefore, any obesity strategy must first assist producers in capturing more of that food dollar. If fruit and vegetable policies do not insulate farmers from the price reduction required to increase demand of their product, many farmers will be forced out of production, thereby undermining the efforts to increase fruit and vegetable production.

Bi-local campaigns have become a common policy of many agricultural departments. The rapid increase in farmer's market attendance and interest in other forms of direct marketing

like community shared agriculture and bi-local campaigns suggest that these bi-local campaigns are, in fact, reaching consumers. While I applaud and support these efforts, farmer's markets and direct marketing alone will not supply the nation's fruit and vegetables.

First, not all farmers are located close enough to urban centers to make direct marketing economically viable. In addition, direct marketing takes a lot of time away from an already labor intensive agricultural production system. And, quite frankly, a lot of farmers are not interested nor do they have the skills necessary to be effective salespeople, even though they might be really great tomato growers.

Moreover, farmer's markets do not meet the needs of many folks in lower brackets who may not have the flexibility to attend a market that is only open for a couple of hours, maybe one or two days a week, or don't have access to affordable transportation to get themselves to that market.

Individual direct marketing is also not meeting the needs of large institutions such as schools, grocery stores where transaction costs prohibit sourcing produce from multiple farmers.

Currently, transaction costs are overcome by sourcing produce from for profit, non-farmer owned wholesalers. However, if farmers control the wholesale of their produce to these institutions, they would increase their share of the food dollar, thereby creating the room needed for that price decrease in order to increase fruit and vegetable demand.

Farmer controlled producer auctions such as those being used right now in Amish communities and conservative Mennonite communities in the United States where can access bulk quantities of fruits and vegetables from multiple farmers at the same time. And marketing cooperatives are proven strategies that increase the farmer's share of the retail food dollar.

Agricultural policies that are designed to support the physical and legal infrastructure of these farmer-controlled direct marketing initiatives meet the needs of both farmers and those large institutional buyers who are providing most of the food all of us eat.

My final point, then, is that any agricultural policy aimed at increasing fruit and vegetable production must reduce producer vulnerability to the inherent risks associated with fruit and vegetable production. Growing most fruits and vegetables is a much riskier endeavor than any other agricultural product.

More production is needed, but it's these risks that act as a disincentive to expanding production or getting new producers involved in fruit and vegetable production.

The inability to find workers or a buyer when the crop is ready often results in acomplete crop loss rather than the just decrease in grade or quality that a grain farmer, for example, would experience. Fruits and vegetable producers require the stability offered by a legal work force. Expanding guest work programs in a way that protects the rights of foreign workers from exploitation and guarantees producers a ready workforce at key times in a production cycle is just one example of a needed agricultural policy. Likewise, on-farm risk can be minimized by supporting the creation of farmer-led processing initiatives that can serve the dual purpose of helping farmers capture more of that food dollar as well as serving as a secondary market for fresh produce that cannot find a buyer.

Moreover, investment in research and development aimed at commodity crops has far outpaced investment in fruit and vegetable crops. Improvements in disease and pest resistance, drought tolerance, and hardiness will help minimize risk and improve profitability, again creating that space for a price decrease needed to encourage fruit and vegetable production -- I mean, demand. Sorry.

For the small and medium size fruit and vegetable producers, an extra week of a saleable crop at the beginning or the end of a growing cycle can be a significant cash injection into their production system.

So, to sum up, to combat obesity, the overall supply and demand of affordable fruit and vegetable needs to increase. However, fruit and vegetable policy will only be viableif it insulates farmers from the price reduction required to increase the demand of their product. By

increasing the farmer's share of the consumer food dollar and reducing their vulnerability to the inherent risks associated with fruit and vegetable production, a decrease in fruit and vegetable price need not come at the farmer's expense. Thank you.

(Applause)

MR. HIRSCHMAN: It is a pleasure to be here this afternoon. I want to extend a hearty thank you to CDC for organizing this conference. This is wonderful. My name is Jay Hirschman, and I'm going to focus on some main points. Let's see if I can get the right -- Three points I want to cover in this presentation.

We've already talked about schools. I'm going to be talking about some additional information about schools as a very important subsystem. I want to talk about USDA school meals, in specific about how they have been improved and how more improvement is on the near horizon but that more needs to be done, and school environments are definitely part of that.

There's going to be a full-hour session talking about school nutrition policy tomorrow morning at the 9:50 a.m. session in the Diplomat Room. If you are interested in this subject, I encourage you to attend.

I was a bit horrified yesterday I woke up and this was in the newspaper when I opened it up. I didn't put it there.

(Laughter)

MR. HIRSCHMAN: Schools are an important subsystem to the U.S. food system. Schools exist in every community in the United States. There are over 100,000 schools in our country. And the reach extends well beyond the school campus because of their ability to purchase food from a variety of sources and the fact that they have funding coming in from a variety of sources. And I'll talk a little bit about that.

The USDA School Meal Programs, the National School Lunch Program and the School Breakfast Program are very large programs. The total funding for these programs is $12 billion a year. They operate a 180 school days a year.

The school lunch program serves approximately 30 million meals on any given school day on
average, and the School Breakfast Program about 10 million meals a day.

Now, this is something that many people don't know. It's buried in one of our technical reports, which is about the funding for the program. If you look at the total amount that's in play in the revenues nationwide, it adds up in excess of $20 billion. I've already told you that the USDA contribution here is about $12 billion. That's the blue part on the bottom. It's the USDA meal reimbursements, and the yellow part, that is the commodities that we provide. The commodities are about a billion dollars, and the $11 billion is the blue part.

But student payments make up about a quarter of the total. State and local contributions are about 9 percent. And ala carte sales and adult meals make up 16 percent.

Though in about 5 percent of the schools nationwide, the ala carte portion is in excess of 40 percent.

I hope everybody here is familiar with the dietary guidelines, which form the basis for Federal nutrition policy. There clear implications of both the dietary guidelines and the Institute of Medicine dietary reference intakes for school nutrition policy.

Since 1995, USDA has required, through regulation, nutrition standards for both the School Lunch and School Breakfast Program. There are specific targets for nutrients at one third of the RDA for lunch and a quarter of the RDA for breakfast and dietary guideline driven

standards for limiting the amount of fat and saturated fat and qualitative standards for reducing the cholesterol and sodium and increasing fiber.

The newest version of the dietary guidelines was informed by the great update from the RDAs to the dietary reference intakes and made some significant changes that are summarized here in the slide. Among these are switching over to quantitative standards for cholesterol, sodium, and fiber that have not previously existed.

We run out of the Food and Service a system of studies called the School Nutrition Dietary Assessment studies, or SNDA studies. The most recent version from 2004/2005 has indicated that while the meals provided in schools are highly nutritious in terms of vitamins, minerals, and protein, and that there's been some improvement over the past 10 years, and many of the schools – many more of them now -- offer the opportunity to select low-fat and low-saturated fat meals, that, in fact, on average the meals are too high in fat, saturated fat, and sodium and do not provide enough fiber.

This is how good schools are in general at meeting all of the standards. Nationwide, when we're looking here almost 10 years after that regulation was published, only five to seven percent of the schools on average are actually in compliance with all of the standards that we have in regulation. What's clear from this is regulation enough is not enough by itself to achieve the objectives we want for improving school meals.

How much time do we have, Joel? Okay.

USDA has decided to lead improvement in our programs with the best science possible. Many of you are familiar with our WIC program. A number of years ago, we contracted with the Institute of Medicine to provide us specific recommendations for updating the WIC program food packages. That report was received. We put forward a proposed rule. We received 46,000 comments on that rule, moved forward to interim final. It will be implemented nationwide in October of this year so that fresh fruits and vegetables and other fruits and vegetables from stores can be added to the program instead of just having juice. It is a major improvement in that program.

We are following a similar model for updating the National School Lunch and School Breakfast Program. We have contracted with the Institute of Medicine and are expecting the final report with recommendations from them in October of 2009. We've already received phase one report, which addressed many of the technical scientific issues that were needed to be discussed. And once we receive the report from them, we expect to go forward with a regulatory proposal, and I will be surprised if we get less than 50,000 comments that we'll have to analyze in response to that.

We have also modified that contract with the Institute of Medicine so that, after they are done with the school programs, they will move on to providing us recommendations for the Child and Adult Care Food Program. We want to move forward with the best science possible, and this is our tool for doing so.

That said, offering healthful school lunch and school breakfast meals is not enough, even if the schools were able to provide that within the reimbursable meal context. Here's a number of other issues and opportunities that present themselves. I don't have time to talk about all of these in the two minutes I have left, but I'll try and touch on the first two.

Historically, USDA has been criticized over the commodities that we provide to schools. And I will tell you, quite frankly, when I joined the agency 25 years ago, that was criticism that I personally believe was well-founded. But one of the early task forces I worked on was to take a look at commodities and to try to chart a course as to what we could do to improve them.

Where we stand now a quarter of a century later is that many improvements have been made. Efforts have been made to either reduce or eliminate added sugars, saturated fat, and cholesterol. We no longer provide shortening and butter through our commodity programs. And there's other improvements that are listed here. A full detail is available on the website.

Competitive foods has already come up a number of times in the discussion. You see here the picture of the report from the Institute of Medicine that was legislatively required and funded through CDC. As you know, there are no current federal regulations legislative authorities for us to regulate competitive foods in school outside of those that are in direct competition with the USDA reimbursable meals in the cafeteria area at meal times.

This is something that very well may change. There are now bills pending both in the House and Senate, and thank you, Senator Harkin, for not just putting it forward but for putting it forward again if it didn't make it the first time because you can't give up in this business if you want to have success. It is possible that that will come through.

What I want you to know as my take-away message about this subject is that we cannot wait. Even if that legislation passes and even if we receive an IOM report with the best recommendations possible, it is likely to take in the neighborhood of three years for us to actually write the implementing regulations and get them all through the entire process to move to final form. There is a great deal that can already be done and is being done schools around the country to improve nutrition, not just within their reimbursable meals, but the entire nutrition environment in their schools. Again, don't wait. Take action now in your own communities, in your states, and working with your partners.

Geographic preference came up. I'm not going to go into this in detail, but certainly, there was a change in the legislation as part of the farm bill. And the key thing here is that we are now required -- the Secretary of Agriculture has required that geographic preference is encouraged. And so I am encouraging all of you in working with your schools to let them know that. Make sure that they are aware of the fact that there is a way to do geographic preference in sourcing. There are some limitations on what is allowed.

Familiarize yourself with those limitations and try to put them in place within your communities.

This next slide will take a minute to come up.

Somebody mentioned earlier the need to provide tools. We have worked through our team nutrition program over, really, the past 14 years to provide a variety of tools to the school community and child care community to make available to them tools that would enable their jobs to proceed.

I thank you very much, and I'll look forward to the discussion that will follow the presentations.

(Applause)

DR. BROWNELL: It's a pleasure for me to be here and to speak to you today. And I have a feeling -- and I don't often have this feeling -- that this is one of these of meetings I will look back a decade from now and consider a historic event in the nation's drive to deal with the obesity problem. And I know our colleagues at the CDC worked very, very hard putting this together. And I'd like to give them a hand.

(Applause)

DR. BROWNELL: I'd like to talk about two primary things. Before I do, I'd like to mention that the work that I'm going to discuss is the consolidated work of a number of colleagues at the Rudd Center at Yale University. And the reason I have our website circled there is, if you're interested, we have free e-mail newsletters that people can get by going to the website that deal with obesity and food policy issues, a variety of pod casts with some of the leading experts in the field and a variety of other resources.

I'm going to begin by making the point that we're here today talking about the catastrophe that has been visited on us by the problem of obesity. But we could as easily have

a meeting this size where we'd be discussing the catastrophe of world hunger, and we could also be discussing the terrible problem of the environmental impact of modern food production.

There are a few people who are interested in putting all these together not enough. And I believe that there are certain themes that unite the groups and people who are interested in the three parts of this triangle that, if put together, could create a formidable team.

We know now that the modern food production is either the number one or number two contributor to global warming, depending on which estimate you use. The environmental world is a powerful world working very passionately to achieve its own aims, but we don't work with them very much. We don't work with the hunger communities. And I think if we brought all these groups together and food systems would be the uniting theme that we could accomplish more. And there are things that we all share in common that I think would be very helpful.

So, just to lay this out a little bit, there are places where there are conflicts between points of the triangle, and here would be an example. There are conflicts with school commodity programs as they were envisioned made to help prevent hunger but, of course, contributed to the obesity problem, less so today than was the case before as we've heard but, nonetheless, a point of conflict.

There are also points of conflict between the sustainability and hunger thing. The corn to ethanol is a perfect example of that that led to world food riots, spiked prices, and foods in many parts of the world.

The green revolution is another example made, basically, to help remedy world hunger but created environmental problems in a number of countries. And this quote from Normal Borlaug, who is really the father of the green revolution, captures it. He says about environmental activists that they have never experienced the physical sensation of hunger, "They do their lobbying from comfortable office suites in Washington or Brussels. If they live just one month amid the misery of the developing world as I have for 50 years, they'd be crying out for tractors and fertilizer and
irrigation canals and be outraged fashionable elitists back home were trying to deny them these things."

Now, he won the Nobel Prize for his work on the green revolution, but he has very little patience for its impact on the environment. So, this would be an example of parts of the triangle working across purposes, but it doesn't necessarily have to be that way.

If we look at the projected – the world distribution of obesity, hunger and poverty, there are remarkable overlaps. So, this graph shows the world distribution of diabetes expected between now and the year 2025. And those darkest colors in Central Africa are the countries expecting the greatest percentage increase in diabetes. And, of course, one would have never imagined the day when this would have been true.

I'm also a strong believer in the point that we need to think globally. Because if the tobacco experience is relevant at all, we could do our very best in the United States to curtail smoking rates, but the simply take their evil deeds overseas. And the number of people projected to die from smoking-related diseases has never been higher.

And if we're not careful, exactly the same thing will happen in the obesity area. So, we may make progress in the United States at the expense of the rest of the world if we're not careful.

If we look at cutting out -- I'm sorry. The formatting got messed up on this a little bit. But this slide shows the number of people in it when you sum the populations of a variety of countries. That adds up to less than the number of people worldwide who suffer from hunger and malnutrition.

So, vast numbers of people are expected, and the worldwide numbers of over-nutrition and under-nutrition are considered about the same at the moment. The world distribution of hunger is interesting.

In this case, the darker colors are the highest prevalence.

So, you can see the same parts of Africa affected by this. And if you look at the world distribution of poverty, as this slide represents, in which case, the lighter colors represent more poverty, you see this strong link between poverty, obesity and under-nutrition.

So, taking a global view of this and bringing together the three parts of the triangle, I believe, are very important.

So, obesity is important. Hunger is important. What about food and sustainability?

One could easily give a talk on many parts of the environmental picture that are affected by modern food production that we live with today.

But I'll give just one example: Water. If you look at the global water use, the great majority of it is used for agriculture, 69 percent. And modern agriculture is very heavily water intensive, and there is a water crisis impending.

Here's a graph that shows -- or a slide that shows the number of gallons of irrigated water that it takes to produce kilogram of different foods -- corn at the top.

The next are sugar beets, and then you have rice, and then you have beef from a cow. So, if people choose to eat the beef from the cow or if that's marketed heavily and people are eating beef for that reason, there are environmental consequences that ripple through our world, not only in terms of global warming from methane gas, nitrous oxide, and the like, but the water impact is pretty clear here.

So, the recent estimate that I saw the water needed to produce daily food for a single person is 1,320 gallons. And with the world population growing, we could see what direction this is headed.

So, water depletion is underway.

Here's a slide that shows a major agriculture aquifer in the Midwest, the Ogallala Aquifer, that serves agriculture in eight different states. It's predicted to be unusable in 20 years.

If we look at use of the world's grain, where is it going? Is it going to people, or is it going to feed the animals that people then eat? Clearly, the numbers here show that it's going to feed the animals that we eat. So, world beef production, which is skyrocketing because of increasing beef consumption in places like China, have created big problems.

And so I have thought of an idea of having something called the Food and Environment World Council that would bring together relevant parties to deal with hunger, obesity, and sustainability at the same time, and it would be similar to the Marine Stewardship Council or the Forestry Stewardship Council. And it would have representatives from all these different groups coming together to see whether these worlds could connect and address these important problems at the same time.

Now, I'm going to end with a talk about -- not so much of a global issue but something that we might do here in the U.S., which would be to use a tax on sugar-sweetened beverages. How many of you would favor such a thing? God bless you.

This is an issue of great debate now, and you've seen it discussed in the papers.

So, I'd just like to quickly provide a rationale.

When I was being introduced, we were kind enough to talk about this paper that Tom Frieden and I wrote in the New England Journal of Medicine called "Ounces of Prevention, the Public Policy Case for Taxes on Sugared Beverage." And there's a very strong case that can be made from science on this.

So, our particular proposal is to use a penny per ounce tax on any beverage that has added sugar. Would something like this work?

Well, elasticity estimates from economists suggests that it would work, that you'd expect about a 10 percent decrease in consumption with a 10 percent increase in price. If the price went up more than that, you'd get even a greater change. And that the revenue potential for this is enormous, 14-and-a-half billion dollars in a single year.

The industry is fighting this tremendously hard. Lobbying -- heavy-duty lobbying in Washington is being used now. It will start up in the states as states begin to consider sugar-

sweetened beverage taxes. And some of you may have seen the full page adds put on by industry in the Washington Post, other newspapers and commercials that are showing up on television from a group called "Americans Against Food Taxes." Well, this, of course, is a euphemism for the beverage industry against food taxes. But if you go to their website to the -- if you click on the "about us" tab, it will talk about how this is a group made up of concerned individuals, families, members of the community, and business. But, of course, it's just a front much as what happened with the tobacco industry when it set up these front groups to try to fight off public policy maneuvers to curtail smoking.

So, if we have -- if we ask whether a food tax would work, we need no more evidence than what we see up there on the slide. If the industry didn't think it was a political feasibility, they would ignore it.

If they thought it was a political feasibility but wouldn't have any impact on their sales, they would ignore it. So, to some extent, we don't need studies. All we need are this kind of data to show us that this is probably one of the most effective things we could do, at least in my belief.

There are objections to this that I'll go through quickly. One is: Why pick on us? Why pick on us if we're the sugared beverages? Well, the science is completely rock solid, robust on this topic, and there's no question it's contributing to the obesity epidemic, more so than other food groups partly because the science isn't as developed in other areas, but it is quite developed in this area.

Also, there seems to be something about the way the body handles calories that come in liquid form that make it different from the calories in solid form. And, of course, the heavy-duty marketing is an issue.

Another objection is that it's the government telling people what to do, and it's an anti-state. But you're not telling people what to do. You're just changing the price. And if people switch over to things like plain old water, they would probably be much better off. The regressive tax argument is the most common one of all.

But if the poor and certain ethnic groups are consuming a disproportionate amount of sugared beverages, we have to ask why. And the low cost is one of the whys. But another why might be targeted marketing that's done to those vulnerable groups by the industry. And so for an industry to the extent they do this, unfairly target those populations and then complain about a tax being regressive, it's hard to have sympathy for that argument. And then also, think of how much money a poor family could change by going to tap water from sugared beverages. A lot of money could saved.

And then, finally, they say, well, you could do this, but it won't solve the obesity problem. True. But no one thing we ever do would solve the obesity problem. And, of course, you have to start somewhere.

So, I ask you, and I've asked myself this, is there anything else we could think of that we could do that could have such an immediate impact it would start to work the day it went into effect. It would have a significant impact on the nation's diet. It doesn't cost anything, in fact, raises a huge amount of money that could be used for nutrition programs.

So, of all the things we see in the array of opportunities to deal with obesity, I don't know many things that meet this set of criteria. So, it seems like a pretty good idea, at least, to me.

At the Rudd Center, we've created a policy report on this. So, if any of you are interested, you could download it from website. And, again, our website is listed there. So, thank you very much.

(Applause)

MS. HADDIX: Well, I'd like to thank all of our panelists for their presentations today. You had two from the supply side and two from the demand side. Almost like world wrestling here.

(Laughter)

MS. HADDIX: But that's sort of what it's like in agricultural policy. It seems like every time you push in one direction, you cause some unexpected event in another direction.

But from my 50-some years of experience, I'll tell you that American farmers are some of the most hard-working, innovative and creative people I've met and are certainly here to help solve the crisis. And I hope when we have the Weight of the Nation II next year, or whenever you're planning it again -- I don't want to put anyone on the spot there -- we'll have a whole new group of folks here who are willing to go along with us on this journey that we're taking to change the way that we grow food in this country and what we eat that will impact, not only what we eat here in this country, but what people around the world eat and where they get their food.

So, I would at this point like to open it up for some questions. I don't know if we have microphones in this room. If we do not, you can tell me the question, and I will channel you and repeat it so that those, who are listening on Webinar, can get it.

All right. There's a question here.

UNIDENTIFIED: (Inaudible).

MS. HADDIX: Okay. Let me repeat the question since the microphone just arrived. That was going to be a real -- let's talk about a physical activity program. That's going to be to run one microphone around this room.

UNIDENTIFIED: We have two. We have two.

MS. HADDIX: She's got two. Okay. So, the question was that, given that under the SNAP program, formerly the Food Stamp program, there are not allowed to be taxes on foods purchased under that food program, wouldn't -- what would happen if we put a tax on sugar-sweetened beverages, and that tax would not apply to the people who are buying their food through the SNAP program who may be the very people that we're trying to target. And I'll direct that one to Kelly whose nodding his head.

DR. BROWNELL: That's a very good question. I don't really know the – there you go. I don't control this. Usually people like to turn mine off, not on.

It's a very good point, and it's a policy loophole that would definitely have to be considered if a national tax policy or even state ones were to be put in place because you'd like to see it applied to the whole population. Now, even if that loophole remained, the tax could still be very but not as helpful as it could be if your issue were addressed. So, I agree.

MR. HIRSCHMAN: Can I respond?

MS. HADDIX: Jay?

MR. HIRSCHMAN: Is this on now?

MS. HADDIX: It will come up.

MR. HIRSCHMAN: The mic will come up. The way that the tax policy works both for SNAP and WIC is generally it applies to the taxes that are applied at the point of sale at the cash registers. So, if the taxes were applied someplace else in the system, I think there would be a way to work around that.

DR. BROWNELL: And that's right. The sales tax is not a good way to apply this because sales tax would encourage people to buy larger containers, and it would also not be seen when people see the product on the shelf. And so an excise tax that gets applied earlier in the process would be much better. So, thank you for bringing that up

MS. HADDIX: So, a lot of the discussion has been on, like, a per gallon tax production. Okay. There's a question -- there are questions all over the place. A question down here?
UNIDENTIFIED: So, Jay talked about the reform that was happening with the WIC obviously already but then also school meals. What about SNAP?

MS. HADDIX: Okay. The question was the school lunch program and WIC are coming up for reauthorization. What about SNAP?

MR. HIRSCHMAN: The SNAP program works on a basis where it provides benefits to households that decrease as the amount of the net income for the household increases. It is something called the benefit reduction rate. And so that the only people who receive the maximum SNAP benefits are people of zero income. And as their income starts going up for each dollar, their level SNAP benefits is decreased.

The assumption that's made in the design of that program is that households, in fact, are going to need to spend more than what benefit they are getting unless they are at zero income. And when you look at the actual information on the low-income population that's served by SNAP, their actual total expenditure on food from both their cash resources and their SNAP benefits is in excess of the Thrifty Food Plan. It totals about 10 percent higher than that or sometimes even more.

The question that has come up in the policy debate is should SNAP benefits be limited so that they can only provide some subset of food, some nutritious set of food such as WIC has a nutritious set of foods. It might be a broader set for SNAP. And the debate really is whether that would have the impact that's desired if these households are already spending a substantial amount of their own cash for purchasing food.

There's also some very real concerns that have been raised about the difficulty in separating things out at cash registers. And I don't have an answer to that question, but I think it is something that is going to be clearly debated. It has been debated for years. I think the debate is heating up, and I expect it will certainly come up again in full force in the next farm bill discussion.

MS. HADDIX: So, you don't expect any out-of-cycle tinkering with SNAP between now and the next farm bill reauthorization?

MR. HIRSCHMAN: There is so much money in the SNAP program I do not think we're going to see outside tinkering of that nature outside of the farm bill process.

MS. HADDIX: Okay. We've had two questions to the demand side. Any for the supply side?

UNIDENTIFIED: Ann, can we get the question back here?

MS. HADDIX: Okay. You have a supply side question?

MS. LEE: No. But it relates the World Council on Food and the environment and the links between obesity environmental sustainability agriculture.

So, I'm Karen Lee from the New York City's Health Department, and we are actively trying to link the built environment act of living work with synergies to environmental sustainability as well. And so my question is: In this world council that you envision, clearly issues related to transportation policy is playing a critical role in energy consumption, global warming, as well as rising obesity rates and chronic disease, mitigation in the developing world.

So, how do you see the act of living built environment piece fitting into such a world council if there is any role for it?

DR. BROWNELL: Thank you. There absolutely is. And I couldn't have stated it better. It would be critical because of all the overlap between those different areas. So, thank you for bringing that up.

MS. HADDIX: Any other comments from panelists? That's a very interesting -- I mean, I think that question points out, once again, how complex the food system is. I mean, since during this talk, we've raised the issue of immigration policy. We've raised the issue of built environment, the issue of transportation policy, all of which affect the food supply and consumption patterns. Next question?

UNIDENTIFIED: My question is for Daniel. I recently watched the documentary "Food Inc.," and they also mentioned how the five big corporations essentially own about 90 percent of the chicken farms in the U.S. And my question to you is: What would you suggest how we address that issue because these farmers really don't have any other choice, and they're forced to become contractors for these big companies.

MR. IMHOFF: Well, I think you can regulate on the one hand, and you can try to rebuild on the local level. What we saw I think what we're increasingly seeing are regulations that are aimed at critical points in the production system. The Attorney General of Maryland, I recently read a letter from him in the Post, and he was asking other governors to join in the banning of arsenic, which is a feed additive in chicken -- poultry production as a growth promoter. Huge amounts of arsenic that go into feed and then are noncontainable, go into water systems into the food.

We are seeing antibiotic legislation, antimicrobial medicine regulation at the national level to try to say, look, if we need to regulate antibiotics and, by doing so, we are going to get to the heart of the scale of these operations.

You could look at anti-trust from the regulation standpoint as well, and at what point do we have healthy and fair markets for other growers who would like to have a different distribution system, marketing system.

You know, from the farm bill standpoint, there's some pretty good data over the last ten years how many billions of dollars in grain subsidies have gone directly to producers in each sector. And without those three-to-four-to-five billion dollars per year over a 10-year period of time, it's a huge amount of the costs of these operations that would also make them less competitive and less efficient with smaller growers.

So, I mean, we're at a difficult point only in that, you know, we've built up the system so that, you know, we have these huge corporations dominating, and there's no way in for the smaller grower except at this very, very small scale. And I think that the "how" is how do we grow the scale and grow the number of independent producers and really take a hard look at things like waste, antibiotic usage, feed, health safety and healthy markets from the regulation point of view.

MS. HADDIX: Patricia?

MS. FARNESE: And if I could to that. We really need an advocate on behalf of the small producers who are trying to work outside of that system, and we're seeing a lot of barriers to their success being pushed on them from odd places or places where you wouldn't expect. And at least in my country -- and I know it's happening here -- the main barrier is biosafety protocols around infectious disease. And so we now have farmers, you know, not being allowed to sell their products unless they're leading -- in my country in British Columbia, we used to do farm gate sales all the time, have a direct relationship with their consumers, but now have to be in a certified facility. And there's only one certified facility, and it's hundreds of miles away. And so they've now lost their market.

And so, infectious disease is a significant concern, but those people, the small producers, tend not to be in the room when the rules are being made. And so need a strong advocate on their behalf to ensure that there are viable, economic opportunities for them as well.

MS. HADDIX: So, one of the things that I was hearing from Dan and Patricia is that one of the, sort of, out of balance in this system is the strength, the weight, that the processor side holds. But it's been the processor's side that's provided the farmer with that risk mitigator by doing forward contracting, providing a lot of the supplies, et cetera, making it very difficult for the farmer to step out into new crops, into riskier crops, and that, perhaps, we need to look at farm policy or other mechanisms than government farm policy to promote either different types of farmer processor, farmer/marketer relationships or other means to mitigate risks than we currently have and other strategies to promote innovation and to try new crops. Is that a fair statement?

MS. FARNESE: I think we're of coming sort of full circle where, you know, after the depression what we saw is the rise of the cooperative movement, farmers working together and owning their own processing sectors as a challenge to the concentration of their buyers. And I've just seen, talking with farmers in Canada and watching the press coming out of the United States, that there's that same interest, farmers doing for themselves and connecting directly with consumers in a way that they have control of their markets. And, you know, it's an old solution that is popular once again.

MS. HADDIX: Anything to add, Dan?

MS. FARNESE: Well, I just see in my own sphere of the country more and more young people who want to get into farming. And I think that we owe it to them and we owe it to ourselves to find ways to help them give access to markets, access to land, and education. And, obviously, it can all start in the schools.

MS. HADDIX: And this is at a time when agricultural education in schools in the US is declining. So, that's another place in which we could push.

How many of those in here have eaten Sun-Maid Raisins? Sun-Maid Raisins? Do you know that Sun-Maid is one of the oldest agricultural co-ops around? It started under -- and was -- The legislative support for that was under one of the original farm bills, and that that was a co-op of farmers. And it was a mechanism for marketing a product and mitigating risks and controlling quality so that consumers could depend, when they purchased their raisins, that they were getting the same quality over and over again.

But it was a co-op of farmers. It was a co-op of farmers that started in my community where I grew up. And I grew up growing grapes. So -- and the Sun-Maid Raisin plant was right down the road.

But there's a good example whose with many -- there are many good ideas, and its time to revisit them.

We're going to take one last question and bring the session to a close.

JULIANNA: Hi, my name is Julianna, and I'm with the San Diego County Childhood Obesity Initiative. And I have two questions regarding subsidies. One is most of the subsidies do go to the five crops that you mentioned. However, in all of my discussions with one of the largest specialty crop governing associations in the country, they're not really interested in getting subsidies for tree and not growers.

So, how do we include them in the conversation, and do you see that they would need subsidies for us to get more fresh produce into our system?

And then my second question is: Being from California where we grow 50 percent of the United States' produce and then we export and additional third to the rest of the world, how do we change the mentality from mass production to something that's sustainable?

MS. HADDIX: Anybody on the panel?

MR. IMHOFF: Well, it's true. It's true. I think that the so-called specialty crop growers by and large have tried to stay away from the table as long as they could until either the opportunity to get some money and to get much needed marketing assistance or environmental assistance was there, or it was of absolute necessity.

You know, it's a long, long discussion, but the bottom line on subsidies is I just think that there should be no subsidization without social obligation. So, if our goals are just to merely produce a huge amount of cheap grain for livestock producers and for food processors, then by and large, we're doing a very good job of it right now. And if we're going to do that and even if we say that we want to do that as a country, then I think at least there should be something that we get back, and that something should be at a very minimum that we're protecting the soil and the water and the biota and our natural heritage for the next generation and the next generation. And I don't think we're doing a very good job of that right now.

And so, you know, that's why, when we're having these huge omnibus discussions, these huge spending bills that really dictate policy and consumer behavior and health over a certain period of time, it's so important that there is some overarching goal. And to me, it's -- you could call it sustainability, or we could call it health, and we have to find new ways that we generate health.

And you know what I would really like to see from when you look at the maps of where he money goes to the very few congressional districts to these very few commodity producing places, even all the -- you know, you can follow these maps where the -- you know, if the disaster money goes one out of every two years over a 20-year period, it's all pretty concentrated. I think we need to revision those maps. How can our USDA subsidies – how can our subsidies, local, state, federal work towards a regional map, something that's far different than what we have today.

MS. HADDIX: And, you know, one thing we might start looking at -- because I too am a Californian and know the issue of specialty crops -- is that -- I mean, there is a partner out here who is not at this table right now and that's probably a really integral partner, another governmental partner, and that's Cooperative Extension and the land grant universities. And one thing that we could do is start right now really looking at how can we strengthen the research title in the farm bill. And that's something that the specialty crop growers have wanted for a long time. They really need the Cooperative Extension out there and trying new things on experimental plots and trying to figure out what works, how to grow things in a more sustainable

way, because farmers don't want to take the risk trying it themselves until they've seen some body of research and some local experience with having produced a new crop.

So, if we're really in a switch farmers over to a more fruit and vegetable production, we need the Cooperative Extension Service and the land grant universities trying out new crops, trying out new farming systems, and then educating farmers on efficient ways of doing it and demonstrating that they can do it at least as risk free as the things they're doing now.

In addition, we need further research on marketing and marketing structures that can be used so that farmers can farm and there are structures in place that allow them to do the marketing.

See, I'm converting back. You know, I've been a public health person now for 20 years, and overnight, I've just switched right back into my agricultural roots.

I know we had one last question here. We had competing questions, and I promise that this will be the last, but I will take three comments from people in this audience who really wanted to be farmers about what you would like to grow if you can do it really fast after this question.

UNIDENTIFIED: This is actually really quick. I was just wondering if the sugar-sweetened beverage tax would apply to flavored milk, and if so, what is the rationale for that? Because the data that I've seen, you know, does not support that that contributes to obesity. But it does -- flavored milk does help children get very important nutrients that are lacking in their diets.

DR. BROWNELL: There are a series of complicated categories. That would be one. Fruit juices are another, and another would be diet beverages. And what we've decided to do so far is to stay where the science is pretty rock solid, and that would be with the sugar-added beverages. And then as the science comes along and helps each of those other categories to the extent we can feel confident in it, then we would move on that too.

UNIDENTIFIED: Flavored milk does have additives -- (Inaudible).

DR. BROWNELL: No, no. No, I agree. I agree.

MS. HADDIX: So, that's an area we still are going to have to sort out.
DR. BROWNELL: But I just think we need more research on that particular category.

UNIDENTIFIED: (Inaudible).

DR. BROWNELL: Not yet.

MS. HADDIX: Okay. So, let's hear from three people in this audience: If you had your farm, what would you want to grow? Real quick. This is real quick, and we're going to end this.

UNIDENTIFIED: Papayas.

MS. HADDIX: Papayas. All right. Flowers. And what else? One more.

UNIDENTIFIED: Olives

MS. HADDIX: And olives. That's great. So, off to this reception and think flowers, papayas and olives. Let's thank our panelists for great presentations.

(Conclusion of "Nexus Between Food Systems and Obesity Prevention")