



## Oral History of Illinois Agriculture

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**Abstract:** Marilyn (Dotta) Nash was born on February 29th, 1957 in St. Louis, Missouri. Marilyn arrived at the National Soybean Research Center in 1996, where she currently works as a program coordinator, especially on finding new ways to utilize soybean products in cooking the human diet. Marilyn discussed the wide variety of ways in which soy products can be incorporated into our diet, especially soy milk, two varieties of tofu, and soybean flour. She emphasized the versatility and health benefits of textured soybean protein, and discussed the challenges of introducing these products into both the domestic market as well as internationally. She also discussed the use of soybean miso in soups and other applications. Marilyn addressed how recipes needed to be adjusted to accommodate the addition of soy products, but also stressed the health and nutritional benefits of soy products, especially due to the high concentration of beneficial proteins. She noted that in 2007 the NSRL kitchens won the annual Game Day Chili competition with their vegetarian recipe.

**Keywords:** National Soybean Research Center; sheep; use of soy products in food applications; marketing soybean products in the United States; promoting use of soybean products internationally; soy milk; tofu, soybean flour; textured soybean protein; miso; soybean chili recipes

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## Interview with Marilyn Nash

# ALPLM\_21\_NashMar

September 16, 2008

Interviewer: Mark DePue

- DePue: Today is Tuesday, September 16, 2008. My name is Mark DePue; I am the director of oral history at the Abraham Lincoln Presidential Library. And this is the fourth in a series of interviews we've been doing with people at the National Soybean Research Center, which is quite a mouthful, isn't it, Marilyn?
- Nash: It is.
- DePue: Marilyn, tell us your name, and your date of birth, and where you were born.
- Nash: I am Marilyn Nash. I was born February 19, 1957, one of the end of the Baby Boomers. And I was born in the suburbs of St. Louis, Missouri.
- DePue: Okay, and a little bit about growing up in the suburbs?
- Nash: It was quite a bit like you would see on *Leave it to Beaver*. You know, playing kickball in the streets; nice, strong family neighborhood; lots of fun. Went to public schools. Had just a really, really, very good childhood.
- DePue: And by the time you were in high school, is this what you thought you might be doing with your life?
- Nash: Absolutely not. I thought I was going to be a veterinarian. I was sure I was going to be a veterinarian. (laughter) To get there, I knew I had to go to college, decided I would do something very totally different because I would improve my chances of becoming a vet, and I enrolled in the College of Agriculture. Had no idea what the agriculture industry was about; I just thought it would help me get into that college.
- DePue: And what college was that?
- Nash: University of Missouri College of Agriculture. As I said, I wanted to get into College of Vet Med—didn't happen. Four years later, I have a degree in College of Agriculture and really no practical experience. (laughter)
- DePue: Did you somewhere along that process decide, obviously, that the vet medicine wasn't going to happen—did you know what you wanted to do with this degree?
- Nash: Not really. I had done a lot of livestock courses in the animal science department—my degree was in animal sciences—so I took off to the wilds of Nebraska to visit a friend the summer of my graduation and was hired on as one of the grunts, one of the day laborers, at the sheep research facility at the USDA US Meat Animal Research Center.
- DePue: What did you do there?
- Nash: Everything to do with sheep. So I learned how to hoof trim, how to shear sheep—I didn't shear the sheep; I just learned how to do it. I helped manage a flock of 1,800 breeding ewes and all their lambing seasons. Did obstetrical work. Really, everything I would have thought a

Marilyn Nash

ALPLM\_21\_NashMar

veterinarian would do if they were around livestock, I felt like I was doing. It was an awesome year and a half, two years, that I spent there.

DePue: But two and a half years, there's something that happened that drew you away from that, then.

Nash: I met my husband there. (laughter) My mom always laughed. She said, "You had to leave St. Louis and live in a town of 500 to find the one man that would make you happy?" So I met my husband—he was one of the other shepherders there—and he went on to Kansas State to get his Master's degree in reproductive physiology, and of course, I followed.

DePue: What's his name?

Nash: Tom Nash. And now—well, I guess we'll get to it—but he's jumped ship. He worked in the sheep industry; I followed and kind of did whatever I could do at K State while he did his degree; we moved down to Southern Illinois, where he managed the University of Illinois's sheep research flock for about four or five years. Now we have moved up here to Urbana-Champaign where he manages the beef research unit for the University of Illinois.

DePue: Excellent. And in each one of these steps, did you get some more education along the process?

Nash: I sure did. At Kansas State, I took a lot of ag econ classes, found I really—felt like I had a knack for it. When we moved to Southern Illinois, I met my soon-to-be graduate advisor. She was looking for somebody that could do database entry with my husband's sheep research flock—all the production records he had kept. So I started working for her, taking some more Master's level ag econ classes at SIU Carbondale. When we moved here, it gave me the opportunity to jump into a Ph.D. program in the College of Veterinary Medicine. It was an epidemiological degree in the Department of Veterinary Pathobiology—a real mouthful.

DePue: But somewhere in the process, you got away from the animals and more towards the plant side of business.

Nash: Well, my Ph.D. was going to be in lamb health research and also management. So one of the things I really wanted to do was take all of the results I was getting from some statistical work and mold it into a model that would simulate a lamb research flock and how those health impacts would be there. One of my committee members was Dr. Steve Sonka. He is an ag economist, and little did I know he would soon become the director of the National Soybean Research Laboratory. So about a year or two before I finished my Ph.D., he brought me over here to work on a new project that he had, called the Soy/Swine Nutrition Research Program.

DePue: Was there something that really intrigued you about that project?

Nash: At first, it was that I was a graduate student and that it would be income coming in. I soon learned I really enjoyed working with the animal scientists, the animal nutritionists that were working in the program. I found I had a real knack for the technical writing. I found that I was a pretty quick study on soy and animal industry. And I just think I just liked it, and I liked the atmosphere here at NSRL and U of I.

DePue: What year was it that you actually came here, then?

Nash: I started as a graduate student in about 1996, 1997.

DePue: And I assume you've finished your Ph.D. now?

Nash: It took me another two or three years. I had a—yeah. It took me a while. (laughter)

- DePue: Marilyn, you don't need to apologize for that. It took me a lot longer than that to get to mine.
- Nash: Yeah, the graduate degree came in 1999, and that was about the time NSRL started getting into the soy foods.
- DePue: What exactly do you do here now?
- Nash: I am a program coordinator. I have been kind of the jack of all trades. So I started with animal nutrition. When we started working with soy foods, I was the food stylist for several of—most of the—all the cookbooks. We had help on the first one—we had a professional train us—and then we took over the food styling. Helped with the recipe development and testing for all of those cookbooks, and then I kind of became a spokesman for the soy foods and the recipes we did.
- DePue: Okay, you got to tell me a little bit more about exactly what you mean in “food styling.”
- Nash: When you see photographs of recipes in cookbooks and in magazines, there's a very long process to getting it to be picture ready. So you don't just make the recipe as you would normally make it and throw it on a plate and take a picture. If you're going to do a good job, it takes considerable time to construct that dish so it looks picture-perfect. So we kind of learned the tricks of the trade pretty quickly and figured out how to do that.
- DePue: But why we're here today is to have you explain to us about all the various and the diverse applications of soybeans in today's world. So why don't you kind of start us off. And I think we're going to start with soymilk, right?
- Nash: We are going to start with soymilk. We're going to start with soymilk because it's one of the most common things that people—when they think that they want to start adding some soy into their diet, they think, What's easy?, and it's often soymilk. Most of the soymilk these days are calcium-fortified. There is no lactose in them so that if you have a lactose allergy, it's a good substitute. Since they're calcium-fortified, you want to shake them before you first get them because there might be some sediment that has settled out from the calcium. And many of them are shelf stable. You won't even find them in the refrigerated section, and they can stay on your shelf for months at a time before you actually use them. Some are refrigerated. Once you open them, you treat them just like you would regular milk: you want to refrigerate them so they don't spoil, and you want to drink them in about the same amount of time as you would dairy milk.
- DePue: Well, for somebody who loves his dairy products, drinks milk every day—the difference in the flavor?
- Nash: If you do plain soymilk, you're going to notice. It might have a little bit of a beany flavor. It's going to be a different flavor. You can ease that transition if you want to go with the vanilla soymilk. You'll still notice a difference. It's a little bit of a different color. It's has a little bit of a brown color to it rather than a pure white like you see with the dairy. If you drink it straight, you're going to notice a difference because you're going to taste the vanilla more than the beans. If you put it on your cereals, you're not going to notice any difference. If you want to bake with it, you can almost use it one for one for almost any of the recipes where you're using dairy. The only thing you really can't use it in are going to be your instant puddings, because it's lacking just the right protein that it would take for those puddings to set up and become a pudding-like consistency. But otherwise, we just pretty much use it just like we would dairy milk in all of our baking applications, in blending it with soymilk smoothies, that sort of thing.

- DePue: Okay, and the nutritional value, especially when it's calcium-fortified, is it very close to what you'd find with milk?
- Nash: It's very close to milk. But you'll want to read labels with almost any new product you're introducing, compare the fat and the calorie content. There are some other flavors of soymilk out there that are going to be higher calorie than the basic plain or unsweetened or the vanilla. So you do want to watch your calorie content. Just because it says "soy" on the label does not necessarily mean that it's going to be a healthier substitute, but most the time, it is going to be?
- DePue: For those lactose-intolerant babies, it's good with formula, then?
- Nash: Yes, it is.
- DePue: What other applications would we use it for?
- Nash: I'm thinking mostly the dairy, the smoothies, and just drinking straight.
- DePue: But if you're baking, and it calls for milk?
- Nash: You can use soymilk.
- DePue: Excellent.
- Nash: And it's kind of nice. If you're going to do a sweet bread, like a sweet quick bread, it's going to add extra little flavor because it's got that little vanilla kick. And it's really a really nice addition.
- DePue: Okay, so what do we have next?
- Nash: So that's soymilk. The other things that most people have heard about are tofus. And in the market these days, there's two different kinds of tofus. These aren't the only brands that are out there, but these are the ones that I have locally. This is the chilled, the cold—the one that you find in the cold section, often in the fresh produce section, or you might find it on a cold rack. This is a shelf-stable style; it's called silken tofu. So we'll talk about the fresh one first. And because it's fresh, they've packed it in liquid, so the first thing you're going to do when you to use it is puncture the packaging and let all that extra water drip off.
- DePue: And it's packed in water just to preserve the texture of it?
- Nash: The texture, and just to keep it moist. It comes in soft, firm, extra-firm. The difference in the tofus, how firm they are, is just how much water's been pressed out. So if all you can find on the shelves is soft or firm and your recipe's calling for extra-firm, just take a paper towel and press it, and you'll soon have extra-firm. Regular tofu is—let me grab a napkin or paper—regular tofu is very bland. It does have a little bit of a beany flavor, but it's very bland, and that's one of the best things about it, because it will take on almost any flavor you'd want to use with it. So if you are wanting to put it in a stir-fry and you cube it, you can soak it in soy sauce or any of the kind of liquid spices you want in it, and it will absorb that flavor. Similarly, if you want to use it in a dip, it's just a matter of taking it and mashing it up. It becomes very crumbly, and then you can also add sesame oils or other real good, flavorful oils to it, and it will take on those flavors. If you've got a firm or extra-firm, you can slice it in chunks, bread it, toss it in a fry pan. It's not the easiest way to get to learn to like tofu, because most people aren't used to that texture on their tongue. So if you're going to try to introduce this into your family's diet, that may not be the first way you would want to do it. The way we like to do it to all of our—to guests that we think are going to have an aversion to trying tofu—we crumble it

- like this, and we make a very traditional lasagna, and where you would have put ricotta cheese or cottage cheese in the layer, you add the crumbled tofu, and nobody can usually tell the difference. And it's really a nice way of introducing tofu to a family.
- DePue: I know the Orientals like to cube it and use it in a lot of soup applications—not my favorite way to use tofu.
- Nash: No, because we're often put off by that texture when we first bite into it. It's not our favorite.
- DePue: And as you mentioned before, it really has no flavor at all, so you know, I'm not expecting that when I bite into it.
- Nash: Right, but you know, a lot of those Asian dishes, if you marinate this—put it in something for twenty minutes—it'll take on some of those flavors.
- DePue: My wife puts it in soy sauce, throws some red pepper in there, a little bit of garlic, and marinates it in that for a while, and it's delicious that way.
- Nash: Yeah. The other kind of tofu that's out there on the market is the silken. Usually, it's shelf-stable. So like this has an expiration date of about—well, when I bought it, it was six months out, so it's really a nice product you can throw on your shelf and have around to throw into things. It's called silken. You'll see it has a little liquid in it too—not much, just like a tablespoon. But it's very different.
- DePue: Well, it says, “light.” Is that because there are less fats in it?
- Nash: This is just a light version. It doesn't have to be light. It's very different. So this is very crumbly; this has a very smooth texture. It's made with a different kind of coagulant, so it's very different. This kind of tofu will not slice—you can't fry it—but there's a lot of other good applications for it. Our favorite thing—this is another thing you can throw in a blender with frozen berries and make a smoothie out of it. We like to blend it with a little bit of the liquid and throw it in a cake mix. This is our no-fuss cupcakes. We take out all of the oil, we cut way back on the eggs—one or two eggs instead of the two or three that go in there—and then we blend up half a brick of this tofu with the liquids, and we bake it, and we've cut way back on the calories and way back on the fat, and we have a really nice, moist cupcake.
- DePue: And no real difference in the flavor of it?
- Nash: Nope. Except for it being a nice, moist crumb, you're not going to notice any real change in the flavor. We do recommend that you blend it as smooth as you can if you're going to do a chocolate cake, because otherwise you get little flecks of white in there, and it will tip your guests off that they're getting something besides just plain chocolate cupcakes.
- DePue: So for baking applications, what you're really replacing are both the eggs and the milk in a lot of these?
- Nash: No, some of the eggs and all the oil is what we've done, so you cut back on the oils, because the soybean—tofu has some of the oils still in it. It hasn't gone away. So that's one of the nice things we do with the silken. And you can also use this in dips, so this makes for a real nice, smooth spinach dip. You take out some of the sour cream or some of the other things that would go in there, and you can add some silken.
- DePue: I like all that sour cream, though.

Marilyn Nash

ALPLM\_21\_NashMar

Nash: You won't notice the difference. You know, you just won't notice the difference. I promise you, you wouldn't notice the difference.

DePue: And it would be a lot healthier for me, huh?

Nash: Yes, it will be. It will add some healthy benefits to it. Let's see.

DePue: What else with the tofu? Are we ready to move on?

Nash: I think we're ready to move on.

DePue: And I think what we wanted to talk about next was the soy flour applications?

Nash: Yep. Soy flour—you can buy soy flour in the stores as either a defatted or a full-fat. We like to get the defatted because we can store it in our bins just like you would regular all-purpose flour. It's a finer powder, so you want to be careful when you're adding it to dry ingredients, because it will poof up and get you in the face.

DePue: When we were watching all the processing steps—I guess I'm curious—I guess I'm speculating that we took soy meal to make the flour.

Nash: Yes, but they dried that—I'm trying to think. It is like a—yeah, they've taken—especially if it's a low-fat soy flour, they have taken all the oils out, so it would be like a meal. But they've dried it, they've kind of extruded it, and they finally crumb it like this or finally make fine flour.

DePue: So essentially, we got all the oil out; what we have left is fiber and the protein.

Nash: Yes.

DePue: Which is quite distinct from most flour, then.

Nash: Yes. But it can't stand alone in your baked products. It doesn't have the gluten that your wheat flour has. So if you were to do 100 substitution, your breads won't rise; you won't get a fluffiness to it. This is more of a supplementation for it. When we do quick breads, we can bump it up to almost a 25 percent substitution, so a quarter cup and then top off for three-quarter cup of flour for your applications. If you're going to use a wheat bread, like a yeast bread, since it needs more structure to rise, we back that down to about 15 percent of soy flour to your cup of all-purpose flour.

DePue: What are the advantages, then, of using the soy flour?

Nash: Industry's found out that there are some functional properties to it. If you add soy flour, it tends to hold on moisture and to promote moisture and flavors in a different way than wheat flour does. So it will give you a little bit of a moister end product. It will brown a little bit faster and give things a nice golden brown. When we tell people about how to adapt their recipes or as we've adapted recipes, we know we have to turn our temperatures in our ovens down about 25 degrees, or things might overcook. So you want to turn your temp down a little bit. You might have to add just a little bit more liquid to your recipes, because the soy flour tends to grab on to the water molecules and be a little more gummy than liquid.

DePue: Does this increase the protein content in the food.

Nash: Yes, it does.

DePue: And that's one of the big pluses, then?



- Nash: That's one of the pluses. For the yeast breads, I would say probably more of the functional properties of how it's browning, how it's moist, that sort of thing. When you've bumped up to 25 percent, though, you can make a pretty nice difference in diets. We pushed up higher than that. That's okay—some audiences really want it higher. We've had requests from other countries where they've looked for something very high-protein, like a high-protein bun that they could serve to school-age kids in Africa. And in that case, they are less choosy about whether there's a beany flavor to it, because they want something that will provide a half a day's worth of protein for those kids when they go for lunch. And so we've come in the test kitchen, and we work and work and work until we can come up with a product that will cook under their conditions and give something that's acceptable to them.
- DePue: Now, you mentioned some of these foreign countries and the applications that they're looking at, but my guess is, this is not an easy sell, to use a lot more soy flour in the United States.
- Nash: It isn't, because most people have a hard time justifying having one more product on the shelf, one more ingredient to have. And in today's lives, American lives, not too many people are doing things from scratch. So that is a little bit of a hard sell.
- DePue: Is it easier to adapt it in some commercial applications, in the manufacturing end, for example?
- Nash: Definitely. Yeah, definitely. But I can't speak to—I mean, I know that it's out there. If you look at the list of ingredients, you'll see soy powder. A lot of times, you'll see soy isolate to really give a boost of protein in things like power bars. I know it's out there, but they've kind of figured out the best way of introducing it into their products.
- DePue: Okay, I think the next one we wanted to talk about a little bit was the textured vegetable protein.
- Nash: Yeah, this is our TVP. It's called textured vegetable protein or textured soy protein.
- DePue: TVP?
- Nash: TVP or TSP. And it's not that easy to find this. We're finding it in our larger grocery stores. We find it in either a baking aisle or in an aisle where they advertise health foods or bulk bins, where you can buy things by the pound. This is a very versatile ingredient, and it's one of my favorite secret ingredients. When you take this and add almost a one-to-one ratio of—like a cup of TVP and a scant cup of boiling water, this will soften up and start looking like meat. So if you want to rehydrate it, and you add a little Worcestershire sauce or steak sauce to that hot water, it will start taking on the properties and the flavors of meat products. If you wish to rehydrate it with boiling water that you flavored with an orange extract or a little vanilla, it will give it a sweet flavor. So when we're making our biscottis here, we'll just use it dry, and we'll just add a little extra liquid to our recipe, and it takes on all of the sweet flavors and the fruity flavors that we put in our fruit biscotti.
- DePue: Is this what they would use, then, if we're making a tofu hamburger?
- Nash: Yes, it is often the TSP that you'll see there. Again, you'll need to look at your list of ingredients. Sometimes they've used other kinds of soy, like soy isolate, but TSP is one of the things—it may not be exactly in this form, but it will be their version of a TSP.
- DePue: If I got myself a soy hamburger versus a regular grilled hamburger, how much taste difference would I have?

Marilyn Nash

ALPLM\_21\_NashMar

Nash: It depends on how much you want. I mean, there are some audiences—there are some vegetarians and vegans that really don't want to have a meat flavor—so there are some garden burgers and other burgers out there that have gone very far away from it, and then there's some others that will almost taste like grilled steaks. So they've mastered how to get the flavor almost perfect.

DePue: And they're obviously putting in a lot of additives or flavorings to get to that point.

Nash: They are, they are. And here in our kitchens, when we're going to serve TSP hamburgers, we won't get a very positive response unless we blended it with ground beef. So I'm all for meat extending. I'm not going to ever tell anybody to not eat meat—my beef-producing husband would never stand for that. (laughter) But I do like a fifty-fifty blend. So I can add about half the weight with rehydrated TSP and half the weight with our ground beef, and if I've got extra flavorings in there—a little salsa sauce or garlic or something—it's really hard to tell that it's there. Our big claim to fame last year was it was our second year competing in a local chili cook-off, and we went—

DePue: That's serious business, there.

Nash: It is serious business. And the first year, we learned our lesson. We watched everybody around us, and they had added a lot more heat—you know, a lot more spice—to their chili. So last year we added a little chipotle chilis in adobo sauce and went straight TVP again—otherwise, the recipe was the same—and we took first prize against about a dozen all-meat entries. And it was a blind taste-test; the judges had no idea that what we had in there was anything but meat. And we thought it was a real feather in our cap, to see the reaction of the judges when they had to give the chili cook-off prize to the vegetarians. (laughter)

DePue: Marilyn, you didn't do any gloating afterwards, did you?

Nash: Yeah, we did. Yeah, yeah. (laughter) We made sure it hit all the newspapers. We went as national as we could with the surprise. We were really surprised, because we have a lot of people who look for us when we're there that they're looking for options besides all-meat, but we really—we don't expect to capture the taste buds of people who want to have a traditional meat entrée, but it worked. So that was our claim to fame: we were able to win.

DePue: Would you say it's more difficult to get the texture of meat than it is to get the flavor of meat?

Nash: I'd say so. That's probably it. Yeah, definitely. At my home, we like to do a fifty-fifty blend; we like to put a little soy—a little TVP—and a little ground beef in our chilis; then nobody can tell the difference.

DePue: Okay, anything else on this?

Nash: Nothing, except for it also goes well in baked products, whether you use it dry like this, because then it will give a little extra crunch to your cookies and biscotti, whether you rehydrate it and substitute it for some of the other dry ingredients. It's a really nice addition for that.

DePue: Okay. Some of the other less traditional, or at least some of the things that are less familiar to Americans. I know you wanted to talk a little bit about miso.

Nash: Can I walk to the fridge for a sec?

DePue: You bet.

Marilyn Nash

ALPLM\_21\_NashMar

- Nash: Because I know we had some miso in here. (pause, doors/drawers opening and closing) This, and we'll grab this, too. This is a bag of miso, which is basically just a fermented soy product. It's very much an Asian product. It's come to us from more of their taste buds than ours.
- DePue: I know they use it a lot in flavoring for soups.
- Nash: Yes, it adds a nice, rich flavor, and usually, it just takes a tablespoon or so in the products. You can't tell it's there once it's there, except it will add a very subtle, nice, rich flavor to your soups, to your stir-fries, but it's—
- DePue: Kind of a meaty flavor to it?
- Nash: I'm trying to think—no. I'm trying to think from the... I don't think meaty. It's kind of—I don't know, it's just a fermented bean, but it tastes better than that sounds. So I'm not going to have it straight because I imagine it's going to—I don't want to have—
- DePue: Yeah, explode in your mouth, I would guess.
- Nash: Yeah, explode in my mouth. Yeah.
- DePue: It also has quite a bit of sodium in it, doesn't it?
- Nash: Yeah, it does. But you're only going to use a tablespoon or two in a whole recipe, and it lasts forever in the refrigerator. So if you can find it in your grocery store, I'd say grab a bag, stick it in your fridge, and try using it in some of your broths and soups in the future.
- DePue: Okay, can you walk us through that plate of cookies that you are so proud of. Just quickly kind of walk through the recipe for that—how that would differ from regular cookies.
- Nash: Oh, the double chocolate-chip and raisin cookies are about 25 percent soy flour. And they are a very traditional cookie. They've got butter; they have eggs; they have, you know, nice, high-quality chocolates and raisins and things in it; but because of that soy, we have enhanced the protein a little bit. It really isn't a health cookie, and we will never market it as a health cookie; it's our introduction to soy foods for many people.
- DePue: But because you've used the soy flour, is there less calorie content?
- Nash: It's got about 125 calories per cookie. Because we've got the other products in there, the butters and the sugars, it's not going to be a lower calorie. It will have a little bit of a protein boost. But really, we call it our "come-on cookie." It's for the audiences out there that have never tried any kind of a soy food at all, that are skeptical that they are going to like it, and if we give them this cookie and they taste it, and they go, Oh my gosh, this has soy in it? And then it's a much easier segue when we say, Okay, well, if you like that, you're also going to like this chili that we made with a soy product or you're also going to like this soymilk that you can have with it. So it really is our foot in the door for some of the soy introductions.
- DePue: Well, you're going to have to let me know when you have the next chili cook-off.
- Nash: It's coming up in two weeks.
- DePue: Oh, wow. Very good. Anything else you'd like to tell us a little bit about?
- Nash: The other things that are out there to watch for are canned soybeans—you can find them as black soybeans or the yellow soybeans. You can use them in almost any applications you use regular beans. So you can open them up, rinse them off, and throw them in your chilis. There

are some really good baked products out there that have used like blended kidney beans or blended black beans, and you can do the same thing with your soybeans. You can blend them up and then add them as a wet ingredient to some cakes and different things like that. People don't know that they're in there, but it's a nice side thing.

The other things that are out there that you're seeing a lot are soy analogues, where they're using soy products, and they're turning them into imitations of other things. So these are veggie slices that will melt—this has a smoked provolone flavor. And you can buy this in mozzarella flavors and cheddar flavors. If you're looking for something to throw in a casserole, you're going to want to make sure that it melts at the temperatures you want to melt it at. Sometimes they'll say "melts," and then when you read the directions, it will say that it has to be very hot to melt, like 450 degrees. But most of the meltable products are ready to go in your casseroles, or you can just cube them and eat them as you would other cheeses. And then there's things like we talked before—chick nuggets and soy hamburgers.

DePue: Great. Twenty years from now, do you think we'll be eating a lot more soy products?

Nash: I think so. I think so, and I think soy is going to be a staple food product in a lot of developing countries. As the incomes rise in some of these countries, there's going to be a higher demand for any kind of a protein. And there's just a limit as to how much protein we can get from livestock, and this might be a nice, high-quality protein that you can get from a vegetable source that will be maybe a little bit more abundant than the meat proteins will be.

DePue: That would suggest that even in third-world countries, where there is no animal protein that is really affordable, that this is an incredible boon.

Nash: Yes, it is. And the TSP or the TVP and the soy flours are two of the big things that our USAID programs are trying to introduce in other countries. One of our missions here at NSRL, we have a whole group that works in going overseas and training people over there in how to use products in their meals. So we don't want to teach them how to make our biscotti; we want to teach them how to make their soups and stews using their staple crops. So it is one of our missions, is to try and improve the protein quality in developing countries.

DePue: And as stubborn as we Americans can be about changing our palette and adopting new tastes and flavors and textures, I suspect that even in other countries, it works the same way sometimes.

Nash: It does work the same way, and that's why it's really important for us to have some of these one-on-one contacts, that we don't just send them recipes, that we don't just presume to know what they want, that we actually go visit and find out, what do the kitchen staff in their schools want to cook with? How do they cook? And then sometimes we'll have to come back here and adapt—revisit in a few months and tell them what we've learned, how we can help them adapt.

DePue: Does that mean you get to do some travel overseas?

Nash: I've deferred that. I still have a younger child—I'm waiting until she's a little out of the nest, and then I can't wait to jump in. As it is, I don't mind being an advocate for introducing it into the U.S. diets and doing field trips and health fairs and traveling around the state doing that sort of thing.

DePue: Well, Marilyn, it's been fun talking to you. You're obviously passionate about your subject here.

Marilyn Nash

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Nash: I am. I really like soy foods. I was really, really surprised when I first started working on some of the recipes for our cookbooks—I was really surprised at how much I liked them. And then pretty soon, it was very easy to bring in our own home recipes and start adapting those. And it was a real eye-opener, to see how we could change how healthy our meals were and how much better we could make them with some of the soy products.

DePue: Any final comments for us?

Nash: Well, that was it. I really enjoyed this. This was a nice experience. Thank you.

DePue: A nice opportunity, and it's great information for everybody who's going to have the opportunity to watch this.

Nash: Well, thank you.

DePue: Thank you.

(end of interview)