CERTIFIED TRANSCRIPT

NATIONAL FEDERAL MILK MARKETING ORDER

PRICING FORMULA HEARING

DOCKET NO.: 23-J-0067; AMS-DA-23-0031

Before the Honorable Channing D. Strother, Judge

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Carmel, Indiana

September 19, 2023

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(Please note: Appearances for all parties are subject to change daily, and may not be reported or listed on subsequent days' transcripts.)

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M A S T E R I N D E X

SESSIONS

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M A S T E R I N D E X

WITNESSES IN CHRONOLOGICAL ORDER

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IN CHRONOLOGICAL ORDER:

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TUESDAY, SEPTEMBER 19, 2023 - - MORNING SESSION

THE COURT: On the record.

I'll swear you in again. Raise your right hand.

DANIEL MUNCH,

Being first duly sworn, was examined and testified as follows:

THE COURT: I understand you're self-represented for a few minutes here, so you may -- I guess you gave your background and all previously.

THE WITNESS: I have not been up here, yet, so --

THE COURT: All right. Introduce yourself, who you work for, business address.

THE WITNESS: Sounds good. My name is Daniel Munch, D-A-N-I-E-L, M-U-N-C-H. Business address is 600 Maryland Avenue, Southwest, Suite 1000W, Washington, DC, 20024.

I'm not attempting to characterize myself as an expert, although I would like to provide some background information on myself for context.

I am the economist for the American Farm Bureau Federation, the largest general farm organization in the nation, which gets to boast itself as the voice of agriculture due to its diverse membership in all 50 states and Puerto Rico, and nearly 6 million farmer and rancher families.

As a general farm organization, we represent dairy farmers, but also the farmers who grow the feed for dairy farmers. The farmers and ranchers who grow beef, poultry,

pork, lamb, fish and all other forms of animal protein, as well as major row crops, specialty crops, horticulture, forestry, and everything in between that provides us and the rest of the world, food, fiber, and fuel.

As such, in my position I not only cover dairy markets and policy, I also cover specialty crop markets, transportation infrastructure, invasive and endangered species, public lands, disaster assistance, aquaculture, and a number of other topics.

I have been on the economics team of AFBF for over two and a half years. I received my Bachelor's of science from the University of Connecticut -- go Huskies -- with a double major in livestock management and policy and resource economics. I then went on to receive my Master's of science from Cornell University in applied economics and management, with a focus on agricultural and food economics.

My Master's thesis research was in dairy marketing topics, estimating the value of cooperative membership, and running analysis on milk pricing topics in the Northeast. Sorry.

THE COURT: Do you want to keep going or do we want to switch off? Do you have a statement that you would like to present for the record today?

THE WITNESS: Oh, I wasn't -- I still had a little bit more.

THE COURT: Oh, I'm sorry.

THE WITNESS: They were asking me to slow down.

THE COURT: Oh, okay.

THE WITNESS: I paused for a second.

I've worked on Capital Hill in agricultural policy issues in the House of Representatives for Farm Credit East, and as a protein commodity analyst for Urner Barry, a leading animal product price supporting company.

And just to put things into context, I took one of the last iterations of Dr. Novakovic's virtual dairy markets classes. I was -- Dr. Chris Wolf came in in my last semester, another witness, and then I was also a student of Dr. Harry Kaiser's in his --

(Court Reporter clarification.)

THE WITNESS: And I was also a student of Dr. Harry Kaiser's, another previous witness, in my first semester of grad school. All to say, that there's a wealth of knowledge out there, and I appreciate the opportunity to be up here on behalf of the American Farm Bureau Federation.

I will now be reading AFBF's statement listed as -- is it AFBF-3, Roger?

DR. CRYAN: Yes.

THE COURT: Let's mark AFBF-3, Exhibit 222, for identification.

(Thereafter, Exhibit Number 222 was marked for identification.)

THE COURT: You may continue with your statement.

THE WITNESS: Thank you.

The American Farm Bureau Federation has nearly

6 million members in all 50 states and Puerto Rico, including many thousands of cooperative and independent dairy farmers. All of these dairy farmers are indirectly or mostly directly affected by the pricing provisions of the Federal Milk Marketing Orders. These dairy farmers play a crucial role in the development of AFBF dairy policy. Every Farm Bureau position and proposal is based explicitly on that policy, developed through a grassroots process in which farmers make the decisions every step of the way.

AFBF submitted nine proposals for consideration in this hearing, and appreciates the opportunity to address the four that were accepted by USDA, as well as the clear direction on what may be needed to advance the rest.

A fundamental focus of AFBF's proposals is a reduction or elimination of negative producer price differentials and the depooling they cause. We believe that an orderly pool is the key to an orderly marketing -- a key to orderly marketing and ensuring Federal Orders continue to benefit farmers, cooperatives, processors, and consumers. The key to an orderly pool, in turn, is above all, the proper alignment of the four class prices.

This statement covers Category 3, Class III, and Class IV formula factors, and includes AFBF's response to Proposal 7 made by the National Milk Producers Federation; Proposal 8 made by the Wisconsin Cheese Makers Association; and Proposal 9 made by the International Dairy Foods Association.

AFBF supports adjusting Make Allowances to reflect the changes in costs and technology, following the same general logic as NMPF's petition. We believe, however, that such adjustments cannot be fairly undertaken except using the data from a mandatory and audited USDA survey of at least the plants participating in the NDPSR survey.

At the time of Order Reform, product formula prices were instituted using a combination of voluntary survey and a mandatory and audited survey.

The voluntary survey conducted by Dr. Stephenson, among others, and used as the primary source for Order Reform, was one of a series of studies that had been undertaken as a means of evaluating and benchmarking plant costs for the benefit of plant operators.

Because that survey's purpose had not previously been the setting of regulatory parameters, there was no obvious bias in the self-selection of participants. Each participant was, presumably, interested in a full picture of costs, including seeing how they stacked up.

However, more recent surveys, particularly the 2021 update conducted by Dr. Stephenson, was commissioned by USDA with the clear intention of making its results available for proposals to update the Make Allowance, and its update in 2023 was also explicitly commissioned for regulatory purposes.

This, unfortunately, creates an equally clear incentive for dairy manufacturers to be selective in their choice to participate, and an unfortunate temptation to be

creative in the accuracy of their reporting. As a result, whatever value the original voluntary survey had for the original development of Make Allowances in the price formulas, has been substantially undermined by potential bias in the survey.

The publicly released 2021 survey, for example, represents only 60% of the nonfat dry milk plants participating in the NDPSR, 29% of the dry whey plants, 24% of cheddar cheese plants, and 20% of butter plants. The conclusion must be that it will be unfair to increase the Make Allowances based on this survey.

And those values are from a webinar that Dr. Mark Stephenson did for USDA on the first survey. Those statistics were directly from that webinar posted on USDA's website.

IDFA contends that the 2023 update to Dr. Stephenson's study captures a higher percentage of product plants and volume, therefore, nullifying our concerns. Even with the improved sample size, nearly 45% of cheese and nearly 50% of whey volume are still not captured. Our members have expressed ardent concerns over plants who elect not to participate in voluntary surveys that are used to inform regulatory decisions. Even small variations in reported cost numbers could lead to Make Allowance changes that unfairly substantially reduce the price paid to farmers.

AFBF also has concerns with the projections made by Dr. Schiek on behalf of the International Dairy Foods

Association. The regression analysis used to estimate the source of changes in the labor, utility, and other costs, are based only on 15 annual observations for 2000 through 2016, which is a relatively small sample size for any regression analysis, but especially for equations with three to five explanatory variables, including the constant term, and is even smaller when multiple specifications have been explored.

In addition, the use of dummy variables, which are often applied to explain data in the years that the underlying estimation doesn't fit, raises further concerns about the real fit of the regression analysis.

And as problematic as Dr. Schiek's estimation of the pattern of cost growth within 15 years of observed data, more problematic is the extrapolation of such results beyond the data period to project costs in 2022.

The estimation is to find the best fit within 15 years, which often leads to parameters that help fit the end years, but often becomes unreliable when extended to years before or after the study period. A simpler analysis would have been easier to interpret and would have allowed better evaluation of how reasonable the extrapolated results may be. In this case, a relatively complicated model based on 15 years of data is projected out for six years, generating questionable results.

Regarding the USDA tradition of using two different cost surveys, there is an old saying, "A person with one watch always knows what time it is; a person with

two watches never knows what time it is."

Such is the problem with using two significantly different sets of survey results and blending them into one result. This is more an art than a science, and USDA was put in the difficult position of applying such an art in the past. It is better that we have one very accurate watch, such as a mandatory and audited survey of processing plants.

The last time we knew what time it was, was in California in 2016, as the last mandatory audited survey of U.S. dairy processing costs were those of all manufacturing plants in the state of California in 2016, conducted and audited by the California Department of Food and Agriculture.

This full accounting of processing costs was the useful component of the overall data used to set Make Allowances at the time of Order Reform, because California has been the largest milk producing state since 1993, with over 18% of U.S. production in 2022. It's been the largest butter producing state since about the same time with roughly a third of current U.S. production, and the largest nonfat milk producing state with 44% of U.S. production in 2022. California is also the second largest cheese producing state, with 17% of U.S. production in 2022.

Since the 2016 California survey was a mandatory -- was mandatory, a representative sample of commodity dairy products was captured providing an

important check to voluntary surveys. The CDFA survey was discontinued in 2017 after the promulgation of a Federal Order in California.

Although it did not evaluate product yields, this survey would provide a basis for a conservative one-time increase in Federal Order Make Allowances, preferable to those proposed by NMPF and IDFA. These numbers are nearly in line with both NMPF's proposal and with IDFA's proposal, proposed initial Make Allowance increases.

Our conclusion is that any fair update of the Make Allowance must be based on a mandatory and audited survey of costs and yields of at least the plants participating in the National Dairy Product Sales Report.

Currently, only the 2016 CDFA survey comes close to this. We at Farm Bureau are working with NMPF and IDFA to pursue language in the upcoming Farm Bill that would direct USDA to conduct such a survey. AFBF, NMPF, and IDFA, all by their own testimony, hope to have the official data -- survey data as soon as it practicable.

Given the continued investment in dairy processing capacity, it is a real question whether the Make Allowances are too low at all. Moving forward with increases now could easily go too far.

Handler groups have often argued that they cannot reap the benefits of charging higher prices in the marketplace because those prices get looped into the NDPSR survey, meaning the Make Allowance is the only monetary value they can operate off of. This point holds less

water when less than 10% of butter, about 10% of all cheese, 28% of whey, and 52% of nonfat dry milk volume is captured in the NDPSR.

Combined for the presented commodities, the NDPSR captured 19.6% of total volume in 2000; 18.3% of production volume in 2011; and 14.8 of total production volume in 2022, for an average decline in 1.1% in total production captured annually.

On average, less than 20% of the total production of cheese, butter, nonfat dry milk, and whey, have been captured in the NDPSR survey, with a clear decline in the percentage of butter, whey, and nonfat dry milk captured.

Considering the various other dairy products that are sold and not included in the NDPSR, the true volume of dairy products captured by the NDPSR is likely much lower than 14.8%.

Additionally, a comparison of the 2023 NDPSR survey to the latest National Agricultural Statistic Survey, Dairy Product Survey, reveals that 17.2% of butter processing plants, 61.4% of nonfat dry milk plants, 53.3% of dry whey plants, and 12% of cheddar cheese plants are captured by the NDPSR survey.

In total, 7.2%, a drop from 7.8% in 2018, of all manufacturers that produced one or more dairy products are captured in USDA's mandatory price reporting. This means that more than 92% of dairy processing plants are not required to report the prices for the dairy products they manufacture and sell.

Given these statistics, one could easily argue that handlers can benefit from the sale of the substantial product volume and product varieties not currently captured within the NDPSR and are not exclusively reliant on the Make Allowance to make ends meet. This is especially true of handlers to diversify their operations, a tactic that many farmers are told to use to protect against revenue uncertainty.

This does not mean -- this does not mean Make Allowances are not important. Our members recognize they are. But they also recognize the system does not restrict all handlers in terms of covering costs. Only a mandatory and audited survey of costs and processing yields can provide a fair basis for adjusting Make Allowances and yield factors within the current pricing structure, just as it has been clearly established that only a mandatory and audited survey of manufacturers' prices can provide a fair basis for setting the monthly milk and component prices used in the Federal Orders.

We believe that such a survey should be conducted once every two years in order to appropriately balance the value of the data with the burden on processors.

This is a -- this is close to a realistic estimate of the time it takes to undertake a Federal Order hearing from petition to implementation. More frequent surveys would be unproductive, although the biannual survey could collect two years of data.

And a final note on using input price indices.

Proposal 9 uses processing input costs to update mandatory audited survey data from California from 2003 to 2016. AFBF opposes using indexing to adjust Make Allowances. Over time, input price increases tend to be at least partly offset by productivity increases. This was observed in the record of 2007 price hearing, in which it was suggested that labor productivity growth, for example, more or less matched wage increases. This is why the full plant costs and yield accounting is critical to any fair adjustment of the Make Allowance.

And we have some resources linked there.

THE COURT: Do you want to take over, Dr. Cryan?

Actually, I did neglect to ask whether the statement was prepared by you, under your supervision?

THE WITNESS: Yes, Roger and I worked on it together.

THE COURT: Close enough.

And did you have any corrections?

THE WITNESS: There was one small typo where I think there was an "as," I think he meant "of." But -- on page 4 in the second paragraph. I believe it said in the first sentence, "and yields at at least," when it should say "of at least."

THE COURT: Very good.

DR. CRYAN: Well, that works either way.

THE COURT: You may take over.

DIRECT EXAMINATION

BY DR. CRYAN:

Q. Okay. Thank you for testifying, Mr. Munch. It's good to see you.

Could you talk a little bit about the policy process that led this beginning in -- well, just generally, including the event in Kansas City?

A. Yeah, absolutely.

So AFBF is a grassroots organization. We have over 2,600 county farm bureaus who are all members of the 50 State Farm Bureaus and Puerto Rico, and all of those farm bureaus are members of AFBF. They all have county-level policies that are developed and voted on at the county level. The counties submit policies to be reviewed at the state level. And if they are state specific, they will vote and approve policy at the state level. And then any policy that is federal in nature will make it up through the counties, through the states, and get approved by both the presidents of all the states and Puerto Rico, in December resolutions, followed by delegate voting session, which has a few hundred farmers at our annual meeting every January.

Q. And those farmers are all elected to those positions?

A. Yeah. All those farmers are elected to those positions by their peers, by other members.

Back in 2019, one of the -- one of the -- one other thing that the members can do is provide recommendations to the board, and one of the recommendations was to hold a dairy working group. And

the dairy working group would have equal representation of each Farm Bureau region. The Farm Bureau regions, being the Midwest, Northeast, West, and South, have two dairy farmers from each of those regions -- sorry, excuse me -- three dairy farmers from each of those regions, to review work with industry experts and come up with a list of recommendations to give to our states for policy development. That dairy working group was re-recommended both in 2021 and 2022, so we have had a total of three years of dairy working groups.

In the 2022 dairy working group, one of their big recommendations coming off of the 2021 working group was that the industry needed to get in a room, get together, and talk about Federal Order issues. And this was in direct response to Secretary Vilsack's request for everybody to get into a room.

So they saw that need, and they requested in a board recommendation -- in a recommendation to the board, that AFBF hold a national dairy Federal Order forum that brought together processors, co-ops, other industry adjacent officials, USDA, and most importantly, farmers, to discuss Federal Order topics. So it was meant to be very educational as well, but also to come up with consensus.

So we had over 200 participants, most of which were dairy farmers, over 150 were dairy farmers, from 35 states. And it was set up in such a way that we had about 21 tables in the room, each with eight to nine people at

them, and they were specifically assigned seating based on regional diversity, making sure you have co-op and processor representation at each table, making sure you had people who sold to an independent co-op at each table. And they were all given discussion questions throughout the conference, related to many of the topics we're discussing at this hearing.

Consensus was measured by how many tables reported consensus on a particular item. So, for instance, we had 21 tables at the forum. All 21 tables supported switching back to the higher-of unanimously, about 19 supported increasing Class I differentials, and the same amount a mandatory and audited cost survey.

And it is important to note that not all tables discussed all the issues. So just because there is less tables doesn't mean that they didn't support it, they just might not have discussed it.

So the forum brought a lot of folks together. A lot of the people that have been in this room attended that forum, spoke at that forum.

And we really -- our members utilized the outcome of that forum for this January's policy process. So many of the new policies related to dairy that we have were directly an outcome of what the industry at our forum came up with.

So I think it really represents the strong grassroots nature, our policy is our farmer's policy, and you know, we get to work on behalf of them.

Q. And for this topic, Farm Bureau policy representing producers is what?

A. Yes. So for Make Allowance specifically, we only support Make Allowance increases based on mandatory and audited surveying. They also -- it's also very important to them that yields are updated in accordance with Make Allowances.

We do not oppose updates to Make Allowances. They clearly want Make Allowances that are fair. We heard last week in testimony, that even small cent changes have a major impact on dairy farmers' bottom line, so they want to buffer against any wrongful increases.

Q. And what's the significance of Farm Bureau presenting the -- and presenting and presenting an overview of the California -- the CDFA numbers from 2016?

A. So our main -- our main goal of including the 2016 CDFA survey and in this testimony, was to show that that's the last time we had an audited and mandatory survey. We understand and we realize it's only California, so it is not representative national costs. But in our mind it's more preferable than the other methodologies that have been -- that have been expressed by other groups.

We don't intend -- you know, we realize some of the other testimony that was brought up last week in terms of labor cost differences, that it's not national in nature, but it's still preferable to the other methodologies we have seen.

Q. And would you just say a few words again,

elaborate on the importance of yields and why that matters?

A. Yeah. You know, as we're well aware, as technology improves, you know, even as farmers get better at their jobs, often yields are increased. And in order to offset, you know, and compensate for those increases in yields in the formula, any increases in Make Allowances should be offset by updated yields. Without updating both, you sort of have an inequality in which piece of the industry you're favoring in our members' opinions. So we want to make sure that yields and Make Allowances are updated together.

And I recall in Dr. Stephenson's testimony, he also agreed that any sort of survey that we have should account for all factors that are used in -- to set a pricing formula. So we agree with Dr. Stephenson there.

Q. And you saw the letter that Mr. Miltner provided the hearing about, from IDFA made very clear that the intention of the last update of the survey was for regulatory purposes, right?

A. Yes. So I believe that was Exhibit 179, but the first sentence of that paragraph was in anticipation of a possible USDA hearing to consider possible adjustments to Make Allowances, and that was in their e-mail to call for survey participants. So that -- that e-mail was sent out specifically for regulatory purposes.

So -- so our concern is, folks might not have participated or might have chosen maybe the lower side of

averages when they reported to that survey because they knew it might be used in this context.

And we have already heard from a number of witnesses, very large processing witnesses, that they did not even participate in that updated survey. So that is concerning to our members.

Q. And even without being dishonest, a processor could choose any of a number of legitimate cost accounting approaches.

A. Correct. And I think it's important to note, you know, he mentioned any outliers would be a red flag and he would reach out. But it's easy to have a lower number and not an outlier number, so I think that's a very different issue.

Q. Do you have anything else you would like to add?

A. No.

Q. Well, thank you.

Mr. Munch is available for cross-examination.

THE COURT: Any questions for this witness?

CROSS-EXAMINATION

BY MS. HANCOCK:

Q. Good morning, Mr. Munch -- Dr. Munch.

A. Not doctor.

Q. Just Mr. I don't think I have ever been in a room with so many Ph.D.s, so it's better to err on the side of confidence.

Okay. So thank you so much for your testimony. I just had a couple of questions.

When I go to page 3 of your testimony, you have included there a comparison of the makes and costs. But this is you just tracking the current numbers compared to where CDFA was in 2016, and then the proposals that have been put forth by National Milk and IDFA?

A. Correct.

Q. Okay. And this was just a way that you could visually see what the differences were in comparing the data?

A. Yes, it was solely a reference for the readers.

Q. And I think Dr. Cryan just clarified this, but the proposal or the position of AFBF is that if you are going to use the data, you want it to be mandatory audited cost survey data, and the last one that you are aware of is the 2016 CDFA survey. Is that fair?

A. Correct.

Q. Do you know what the CDFA's process was in collecting that data that they used from that 2016 survey going backward?

A. I believe Dr. Schiek or -- or another witness had gone over some of their process. I can't recall the specifics, but just from what he mentioned, that's my knowledge of it.

Q. Okay. And did you hear in the description of the process that CDFA undertook that not only did they go out and do the -- the cost -- the mandatory cost survey, but in addition to that, they -- once they collected that data, that they were able to do a subjective analysis of

it and apply kind of a totality perspective around that data in order to set their Make Allowances?

A. I remember the first part. The subjective part, I do not recall. But I don't oppose that that was in there.

Q. Okay. Do you think it would be important to be able to put actual context around the numbers collected in order to make sure that the data reflects actual market conditions that are currently existing?

A. Absolutely.

Q. And we have had some recent examples that we have talked about throughout this hearing, but one of them would be the global pandemic and the rise in inflationary costs that we have seen over the last few years.

A. Agreed.

Q. Okay. And then other things like, you know, wars or conflicts with Ukraine and Russia, that's another example of things that would affect or impact numbers at least on a -- on a temporary, if not a long-term temporary basis?

A. Agreed.

Q. Okay. Do you think that would be important to overlay against the data that's received to be able to put it in the context of what's happening in the market?

A. I think it's important. I think it's difficult in any existing methodology that we have to account for those changes until we have a mandatory survey. So obviously those 2016 numbers haven't been updated for those market disrupting events, but neither have any other options that

we have. So our stance is a mandatory audited new survey. But in the scheme of things, that methodology was more preferable than the rest. Just that's a background example.

Q. Okay. And it's fair to say that even with that methodology from 2016 that you recognized, that there are also some limitations in using that and applying that across the board throughout the country in 2023 or forward?

A. We do.

Q. And one of them would be that that survey is only reflective of what was happening in California?

A. Absolutely. As I mentioned a little bit, you know, we know the labor costs, energy costs, and taxes even, for instance, in California, are much different than the rest of the country.

Q. And another limitation would be that it's outdated. It is already seven, eight years old based on the data that was collected.

A. Correct.

Q. And then another limitation would be that California is not necessarily reflective of what the cost conditions are that exist throughout the country -- that's just the end of it.

A. Correct. We were just -- as far as methodology goes, the CDFA survey is the most preferable option that AFBF sees based on its methodology compared to the other methods. We are not contradicting or, you know, arguing

against any of the faults that you mentioned.

Q. Yeah. And then, I think you make clear in your statement in Exhibit 222 that AFBF's preferred route would be to get a current standardized audited mandatory cost survey of the entire country.

A. Absolutely. And we have led the charge on the language of that. The language that NMPF, IDFA agreed on was drafted originally by Roger, and we have been working with our lobbyists to get that agreed upon by both your groups.

Q. Okay.

MS. HANCOCK: Thank you so much for your time today. Appreciate it.

THE COURT: Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum, International Dairy Foods Association.

Is -- are Land O'Lakes personnel, are they liars?

A. I don't think so.

Q. Do they submit false information under oath?

A. I don't believe so.

Q. Do you believe the information they submitted under oath in this hearing as to what increases they have personally experienced since Make Allowances were last set?

A. I -- I do not oppose anything that Land O'Lakes has said.

Q. You don't?
A. No.
Q. How about their participation in Dr. Stephenson's survey, you believe them when they said they did it?
A. I do.
Q. Okay. Because I mean, you have said people are manipulating their submissions to the survey. That's a pretty extreme accusation, isn't it, sir?
A. I don't think we're accusing any processor of doing so. All we're stating is from our farmers' perspective, without a USDA audit of the data, we have no way of knowing that did not occur.

We -- we trust in many of the processor groups, especially the ones that are farmer-owned, to report data. But as in any industry, there are bad players, and I'm not saying any of the witnesses we have seen here have been a bad player. But there are players out there that may not participate or who participate who could put forth lower data.

Q. Well, sir, if you don't consider this an accusation, I don't know what is. Look at page 2 of your statement. "This, unfortunately, creates an equally center incentive for dairy manufacturers to be selective in their choice to participate, and an unfortunate temptation to be creative in the accuracy of their reporting."

I mean, you're saying people are lying. That's what you are saying, sir.

A. I disagree with that premise completely.
Q. Really? An unfortunate temptation to be inaccurate? To be creative in the accuracy of their reporting? You don't think that's an accusation that people lied in their submittals?
A. No.
Q. Really?
So you do accept that Land O'Lakes' data is correct and it was submitted correctly to -- to Dr. Stephenson? Is that your testimony?
A. I believe that Land O'Lakes, to the best of their ability, completed that survey. I do not have any knowledge, nor was there auditing to know, you know, exactly what the results were. But I have no reason to believe that Land O'Lakes was predatory in any way.
Q. Okay. And you have no reason to believe that their data is incorrect in showing that they have experienced an 81% increase over Dr. Stephenson's 2000 survey -- 2007 survey reports?
A. I have no reason to believe that that is false.
Q. Okay. How about AMPI, are they -- are they liars?
A. I'm not going to assume any -- any processor group that submitted data was a liar.
Q. Well --
A. The way that the survey -- voluntary survey is set up, unaudited, allows for fluctuation in how people can report data.
Q. Yeah, but I'm trying --

A. I'm not accusing any processor. We are clearly just saying that our farmer members have concerns with how the data can be reported.

Q. Are some --

A. And everybody in this room, every witness has agreed to that extent. The mandatory survey, audited, is the most preferred option.

Q. Are some of your farmer members, members of Land O'Lakes?

A. Absolutely.

Q. Okay. Have you heard from any of them suggesting that their, you know, employees, submitted false data?

A. We have heard from many of our members of the concerns they have with their processors, and not particularly specific processors. But this policy directly comes from them.

I was on a call yesterday with a farmer for 30 minutes concerned about behavior of handlers. And I -- I'm on those calls, traveling around the country is one of the perks of the job, every week listening from farmers. They are concerned about the data put forth by processors and want the audited data.

Q. Are they con- -- is -- are the members of AMPI concerned about the data they themselves submitted, whether it was, whether they had given in to the unfortunate temptation to be creative in the accuracy of the reporting? Anyone from AMPI express that concern about their own data?

A. I cannot recall any of my members from AMPI.
Q. Are you aware that AMPI and Land O'Lakes both reported that they had experienced increases in manufacturing costs that exceed the increases that -- that International Dairy Foods Association is seeking in its proposals?
A. I do not.
Q. How about -- how about Darigold, they are a cooperative too, right?
A. Yes. I do not have reason to believe anything that they put forth personally was incorrect.
Q. Okay.
A. I think we're kind of going in circles now.
Q. Well, no, no. We're trying to pin down the reality, sir.
Are you aware that they testified that with respect to all four commodities combined, they have experienced an 80% increase in costs since the last Make Allowances were set?
A. We do not oppose that processors have experienced increases. We do not know to an exact extent on average what that is from the current methodologies.
Q. Do you have suspicions about the accuracy of the Darigold information?
A. Not specific to Darigold. We have suspicions with the methodologies used in both of the proposals.
Q. Well, I'm -- I'm -- I'm focusing specifically on your accusation that there is an unfortunate temptation to

be creative in the accuracy of reporting --

A. There is an opportunity for processors to be creative. That's -- that's true.

Q. But you think -- do you think Darigold was creative?

A. I do not have enough knowledge of Darigold to make a characterization.

Q. How about California Dairies, they provided oral testimony on this question that indicated -- we'll have to check the transcript to make sure I have this exactly right -- but I believe their testimony was that the IDFA proposal reflected percentage increases in Make Allowances that were consistent with the increases they had experienced in their own costs of manufacture.

Do you have reason to doubt the accuracy of that information?

A. I have no reason to doubt it, but it was unaudited. And just like with every other processor, we do not know.

Q. Okay. And, by the way, every -- I mean, ever since -- ever since USDA relied upon the Cornell studies to set the Make Allowances in the 2000 Order Reform, everyone's always known the Stephenson studies were something USDA relies upon for setting Make Allowances. Isn't that right?

A. Yes. But just because there's a precedence of using a flawed path or option doesn't mean we can't improve the system.

Q. Yeah, but I'm focusing now on your separate accusation, which is that because when IDFA undertook the Yeoman's effort to secure the most robust survey ever conducted for setting Make Allowances, that that somehow was a tip-off about how the Stephenson survey might be used. I mean, my God, everyone knew that since 2000, didn't they, that that's what Stephenson surveys are used to do, set Make Allowances?

A. Yes. We do not think IDFA was ill-intentioned when they requested this data. But as we have seen, there are numerous witnesses of very large co-ops, processors that did not participate in that survey.

Q. You don't question -- I can go through the numbers. I mean, you don't question that this is in fact the most robust survey ever submitted for purposes of setting Make Allowances, do you?

A. I don't believe Dr. Stephenson was asked that question. I would trust his judgment. But he put a mandatory audited survey at above the quality of that survey.

Q. And if we could -- and everyone would like to have that, and everyone knows we're not going to have that for years, so --

A. I disagree.

Q. -- so we're facing that reality.

Do you -- but you still haven't answered my question. I mean, I asked whether this is the most robust survey that's ever been used or submitted for use for

purposes of setting Make Allowance in terms of the percentage of the commodities covered.

Do you agree with that formulation?

A. The last time Make Allowances were updated was in 2008, which was more than half my life. So I am not aware of the other surveys or how much more robust they would be than the Stephenson one.

Q. Well, I mean, we just had extensive testimony on that very question yesterday. Are you not aware of that comparison that was provided as to the percentage of total production that was captured by the surveys used to set Make Allowances the last time as compared to the percentage captured in the surveys that underlie the IDFA proposals? Are you not aware of that testimony?

A. I am aware of the testimony. I'm also aware of the testimony from Dr. Mark Stephenson that there were variability and variance concerns amongst both surveys that he ran.

Q. Well, okay. Are you aware that the percentage of commodities captured by the surveys that underlie the IDFA study are materially higher than the percentage of -- captured by the survey used to set the current Make Allowances?

A. Yes, I said in my testimony, Dr. Stephenson's newer study captures a higher percentage of product plants and volume.

Q. Okay. Materially higher. Do you agree with that?

I don't think you did -- actually, I don't think

you did a comparison to the 2000 -- to the surveys that we used to set the current Make Allowances, did you?

A. No, I did not.

Q. I missed that if it was there. Okay.

So -- but you do acknowledge that the percentages are materially higher in the proposals now before USDA, correct?

A. To my knowledge.

Q. And by the way, I mean, just -- do you know that there were back-to-back hearings held in 2006 and 2007 that resulted in -- each resulting in increases in the Make Allowances?

A. Yes. I -- in part of my research I went back and dug into the Federal Register for that --

Q. I mean, do you --

A. -- to understand.

Q. Are you aware that the survey that underlay the second Make Allowance revisions was conducted at a time when everyone was aware of the use of the Stephenson surveys for that purpose because the Stephenson surveys -- an earlier Stephenson survey had just been used to set the first of those two Make Allowance increases, correct?

A. Our position is just because those processes were used in the past does not mean they were not flawed and want to improve the system.

Q. No, but I'm focusing on your specific accusation that, you know, oh, processors knew this time that the -- when they were participating in the 2023 Stephenson

survey, this was going to be used for Make Allowance purposes. That's the accusation I'm focusing on.

I mean, are you aware that when -- when Make Allowances were increased the second time in the 2006 through 2008 time period, that everyone knew that's what the Stephenson survey was going to be used for?

A. I do not -- you know, I do not think that that was not the case. I know, in that case, USDA might have made final adjustments to a combination of numbers. We believe that those numbers should be based on a mandatory audited survey.

Q. Well, I know that. But, you know, you keep going to that. I'm asking a different question. I'm asking whether everyone was aware, when the second of the two Make Allowances increased in the 2006, 2008 timeframe, based upon a second Stephenson survey that picked up some additional, more recent data, that everyone knew that's what the survey would be used for?

A. I mean, I will say then I was not actively involved in the dairy industry in middle school, but I was -- I will not oppose that characterization.

Q. Did you go back and look at the transcripts or anything like that before you started making these statements?

A. I did.

Q. You did?

A. I reviewed the transcripts in the Federal Register, but I did not -- well, I should say, I reviewed

the rule in the Federal Register. The transcripts were not available on the same web page.

Q. Did you -- okay. Did you try to reach out to people who did participate and some of whom are still in this room and have copies of those transcripts?

A. I'm not really sure how this relates.

Q. I'm just asking you whether you made an effort to get hold of the transcripts.

A. In our drafting and in my research I communicated with numerous individuals in this room to help substantiate our research.

Q. And -- and did you ask any of them, hey, I would like to -- before I start talking about whether people -- I mean, you know -- what -- whether people were -- for the first time in 2023 knew that the purpose for which the survey was going to be used, did you say to yourself, gee, I better check and see what people actually knew last time around?

A. I mean, I think we're getting -- you know, that part of the testimony was related to when Make Allowances were first started. The knowledge was that they were -- people were in -- participated in the survey wanting to know all those costs. I do not contend that in later iterations that they did not.

Q. Oh, so you -- your -- that part of your testimony only relates to the survey that was done in, I don't know, 1997 or something like that, but not to the surveys that were done in 2006 and 2007?

A. I believe my testimony says "as used in" -- "as a primary source for Order Reform." And when we refer to Order Reform, I believe that's the 2000 or around 2000 time period.

Q. Now, you are aware that -- I mean, we have had testimony here from Glanbia and Hilmar, which are the two largest cheddar cheese manufacturers in the United States, correct?

A. I don't oppose that characterization.

Q. And you -- you are aware that they testified that they submitted their data from all their cheddar cheese manufacturing plants for inclusion in the 2023 Stephenson study. Are you aware of that?

A. I'm aware.

Q. I mean, you say, quote, "our members have expressed ardent concern over plants who elect not to participate in voluntary surveys that are used to inform regulatory decisions," end quote, right? You say that?

A. That is true, they do.

Q. And have you ever said to them, oh, well, gee, that's -- don't worry, the biggest plants with the most efficient plants, they are in the survey?

A. They are not at these hearings, most of our members.

Q. Okay. Well, have you told them -- I mean, you say you have had recent discussions, like in the last week with your members that -- where this particular issue has been raised. Isn't that right?

A. Yes. Our members are very concerned that the survey does not encapsulate --

Q. And have you --

A. -- the majority of processors.

Q. And in those discussions, have you said to them, we have sworn testimony from the two largest cheddar cheese manufacturers in the United States, Hilmar and Glanbia, that they submitted accurate testimony with respect to the costs of manufacture of every single one of their cheddar cheese plants?

A. I did not specifically go to them and say that, no.

Q. I mean, have -- I mean, I would have thought your members would want to have their concerns assuaged.

A. We are -- we are a not a top-down organization. The intel from our organization comes up, not down. All of our members interact with their processors, interact with their trucking, interact with all the aspects of their business more than I could ever know. I respect and I believe in their characterization and the concerns that they have.

Q. I mean, you have on page 3 a comparison of makes and -- and costs, correct?

A. Yes. That is just for reference.

Q. Okay. I mean, obviously, the current is the current, right?

A. Yes.

Q. It's not -- you are not suggesting that's --

reflects -- strike that.

That's the current Make Allowance, correct?

A. Yes, those are the current in the Federal Order system. We're not suggesting that's what currently should be.

Q. Okay. So that's like data from 2006, 2007?

A. That's what's in regulations right now.

Q. Okay. So I mean, it wouldn't be an expect- -- I mean, you know, you have this chart that seems to show all this variability, this Figure 2, in makes and costs and -- but --

A. The chart was honestly specifically for reference, and honestly just to show the difference in the numbers between the proposals. There was nothing really intended by the variability beyond to compare the CDFA 2016 survey that we believe was a more preferable methodology than some of the other options. There was no other intention by including the chart.

Q. Like IDFA-1 and IDFA-5, though, that simply reflects the fact that IDFA, as an accommodation to farmers, is asking that its Make Allowances be implemented over four years, correct?

A. I believe so.

Q. Now, turn to page 4 where you talk about the NDPSR only covering a certain percentage of the commodity production, correct?

A. Correct.

Q. I mean, that's simply a reflection that USDA

after, I'm sure, very careful consideration established criteria for inclusion in that survey, correct?

A. Correct. The sole reason for me including this section is that our members are constantly told the story of basically a positive feedback loop of if you increase prices, it is going to be in the survey, and it can't go to the farmer.

This is only there to show that in all cases that is not exactly true. In some cases it is. Our members appreciate and understand the importance of Make Allowances, but there are plants who can reap the benefits of higher prices.

Q. Well, let's assume -- you know, I'm sure, that, for example, the NDPSR survey for cheese has cutoff dates for how old the cheese can be, correct?

A. Correct.

Q. And if it's over, I think it is 30 days, you don't get -- it's not a reportable transaction, correct?

A. Correct.

Q. If it's sold more than 30 days after the date of manufacture, correct?

A. Correct.

Q. I mean, so I take it you're not suggesting the NDPSR survey fails accurately to capture the transaction prices for the cheese that's within the survey, correct?

A. We are not saying that at all.

Q. I mean, are you -- I mean, do you -- do you -- really -- and so everyone knows what that reported price

is, right? I mean, buyers of cheese, sellers of cheese, everyone knows the reported price, correct?

A. Yes. It's in the survey.

Q. I mean, are you suggesting that a cheese manufacturer in the real world is somehow able to garner some really higher price if it holds onto its cheese for 31 days?

A. We are suggesting that there's a large proportion of varieties of cheese and volume not captured in the survey, and that the prices on those goods are not included in any regulatory process to set minimum pricing for farmers.

Q. And --

A. So they can reap benefits of higher prices, yes.

Q. In my specific example, are you seriously suggesting that a maker of commodity cheddar cheese can find a buyer to pay a materially higher price than the NDPSR price simply by holding on to the cheese for 31 days, causing that cheese to fall outside the survey?

A. I mean, I'm sure there's nuance around the situation that you describe. I couldn't say yes or no.

Q. Would you hazard a best guess?

A. I would say in one day after, not as likely to be different. But that's not really the point of the paragraph in the testimony.

Q. Well, I mean, presumably, to the extent that -- I mean, I don't doubt other cheeses are sold for other prices, higher or lower, but I mean, don't you assume that

that -- the extent there's a higher price that could be garnered, that's going to be reflected in higher costs, in all likelihood?

A. Can you repeat that question?

Q. Yes. I mean, if you are going to take that cheddar cheese and age it or do something else with it, that causes it to fall outside the NDPSR definitions?

A. Right. I'm not opposing --

Q. Isn't there likely to be a cost associated with that?

A. I'm not opposing that there aren't increased costs associated with other varieties of specialty cheeses, but they can also sell those products at much higher prices that are not looped into the regulatory price for farmers. That's all -- that's the purpose of the section.

Q. And -- and you haven't done any examination suggesting there's not a competitive market for those other cheeses, are you?

A. I believe there is competitive market depending on where you are for some of those areas. In some regions of the country, you have farms producing specialty cheese, in a very isolated area, and it is not a competitive market, depending on the region. There's a lot of other factors at play here, wealth income of a certain region, the consumers you are targeting. There's a lot of other factors at play.

Again, the sole purpose of this was to say that there are other options for some plants to get the

benefits of higher prices, and our farmers are consistently told that no one can increase prices unless the Make Allowances are higher, which is not the case.

Q. I mean, you are aware, obviously, that there have been proposals along the way as to whether or not other cheeses should be included in setting Make Allowances and USDA has consistently rejected those proposals?

A. USDA's precedent in the past doesn't mean that they can -- I mean, that's why we're here today. We're here to amend Federal Orders to make them better. That means that everybody agrees that there's a fault in them, so I believe they can do better.

Q. And do you -- and you say in reference to the California survey on page 4, you say, quote, "Although it did not" -- let me start that question again.

I believe at the top of page 4 you are referring to the CDFA survey that was last conducted in 2016, correct?

A. Correct.

Q. And you say, and I quote, "Although it did not evaluate product yields, this survey would provide a basis for a conservative one-time increase in FMMO Make Allowances, preferable to those proposed by NMPF or IDFA."

Do you see that?

A. Yes.

Q. So your suggestion is that that USDA use 2016 data to set current Make Allowances?

A. Ms. Hancock previously asked questions about this. Our sole intention of including information on the 2016 CDFA survey was to say that it was preferable in methodology to the other options.

Q. Are you say --

A. AFBF believes that of all the options, the CDFA survey from 2016 is the optimal option that we have in terms of methodology.

Q. The optimal option is to use seven-year-old data; that's your view?

A. It's the only mandatory and audited survey. That's -- our -- that's the only purpose of including that. That's the last time there was a mandatory and audited survey. We have already expressed our concerns with the regional isolation of the survey.

Q. But --

A. But, yes, we believe in that.

Q. That's the -- that's the -- that's what they should -- that's what USDA should do, use seven-year-old data?

A. It's the preferable methodology.

Q. I mean, you -- you -- okay.

THE COURT: Wait a minute, I'm not sure we got a clear answer to that.

Are you talking -- you are talking about data; you're talking about methodology. Are we overlapping here? I mean --

MR. ROSENBAUM: Let's be -- well, your Honor --

THE COURT: Nail it down.
MR. ROSENBAUM: Your Honor --
THE COURT: I understand there's a certain repetition here.
THE WITNESS: The option --
MR. ROSENBAUM: I should --
(Court Reporter clarification.)
THE COURT: I'm sorry, one at a time.
MR. ROSENBAUM: I'm -- you know, please.
THE COURT: I want to hear what you just said.
MR. ROSENBAUM: I should allow your Honor to take over.
THE COURT: No, I don't want to -- you're both working hard.
BY MR. ROSENBAUM:
Q. The -- okay. You -- your -- your view is that USDA should adopt, as the cheese Make Allowance, the survey report from 2016 --
A. Our position --
Q. -- conducted by the state of California?
A. Our position is ardently in support of a mandatory and audited cost survey. Of the existing other options, we believe that that is the best option. But our position is for data from a current national mandatory and audited survey as I have stated.
MR. ROSENBAUM: That's all I have. Thank you.
THE COURT: Further questions?
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CROSS-EXAMINATION

BY MR. ENGLISH:

Q. Good morning. Chip English for the Milk Innovation Group.

So in response to questions from Mr. Rosenbaum, you -- and also Ms. Hancock, you said that you included Figure 2 for comparison purposes, correct?

A. Correct.

Q. I just want to note and see if you would like to confirm, for CDFA 2016, under cheese, you have 0.2354.

If the exhibit submitted by Dr. Schiek has current for 2016 of .2454, the record will speak for itself, but if that's the case, then that should be increased by $0.01, correct?

A. I accept that revision to that.

Q. Okay. So even though you are talking about using that for a reference point -- and I'm going to focus a lot of my attention this morning on cheese -- the CDFA 2016 number of .2454 is higher than IDFA for the first year, correct?

A. Correct.

Q. Okay. And I understand your responses, and I'm not going to go back over them, to Ms. Hancock and Mr. Rosenbaum, about the theoretical approach.

But leaving aside the theoretical approach comment, you are certainly not suggesting the costs have gone down since 2016, are you?

A. No, I do not have that data available.

Q. Well, but you have seen data from a number of witnesses that costs have gone up, correct, since 2016?

A. Correct. I have seen that.

Q. Did Dr. Schiek find in his testimony that the information you provided had quote/unquote statistical significance?

A. It did.

Q. Okay.

A. I will note that in a regression analysis, a high R-squared value with a small number of observations often is a sign of overfitting. So that's -- that often is not necessarily just because it has high statistical significance, and the regression analysis doesn't mean that it is not an overfitted model.

Q. But nonetheless, he found statistical significance, correct?

A. Correct.

Q. Thank you.

So I want to go back and focus on a couple things. First, in response to a question from Mr. Rosenbaum about the timing for what might happen in the future with respect to audited surveys, I think I heard you say you disagreed with him on how long it would take.

A. I disagree with the characterization that a Farm Bill will not happen in four years, say. I think it will happen before then.

Q. Well, but isn't -- well, how long would you think a Farm Bill will happen?

A. Our hope is to have it done by the end of the year, if not by -- before June.

Q. Okay. So when was the last time a Farm Bill was passed, you know, without an extension, on time?

A. Well, the timeframe I mentioned does not say that it was passed on time. If it's passed before June of next year -- you know, the 2019 Farm Bill was not passed exactly on time.

Q. Okay. So, now, did you follow some of the discussion, and Mr. Brown talked about this yesterday, assuming even that a Farm Bill were passed say in June of year, you understand, of course, that USDA then has to put the program together, correct?

A. Correct.

Q. And they have to end up surveying plants that have never been surveyed before, correct?

A. Correct.

Q. And then they have to audit all that, correct?

A. Correct.

Q. And then they have to come up with results of that study, correct?

A. Correct.

Q. And then the industry has to talk about it, correct?

A. Correct.

Q. And then somebody has to submit a hearing proposal, correct?

A. Yes.

Q. Okay. So USDA hired Dr. Stephenson originally for the study that came out in 2021 in 2018, correct?
A. Correct.
Q. And we're now five years past that, correct?
A. Correct.
Q. So I want to go back because I don't think you actually answered the question. And I apologize that was my fault.
When was the last time a Farm Bill was passed on time?
A. I do not recall off the top of my head. I want to say 2002, but that could be incorrect.
Q. Okay. So, now, I want to go back to your comments that you made a couple times that a number of large processors did not participate in the Stephenson survey of 2023. I want to focus on cheese.
You agree that Hilmar testified that it participated, correct?
A. Yes.
Q. You agree that Saputo testified that it participated, correct?
A. Yes.
Q. You agree that Leprino testified and participated, correct?
A. Yes.
Q. You agree that Glanbia testified and participated, correct?
A. Yes.

Q. And you agree that AMPI testified and participated, correct?
A. Correct.
Q. And we also heard that Land O'Lakes participated, correct?
A. Yes.
Q. Okay. Which large cheese manufacturer did not participate?
A. I do not know off the top of my head, but there's a substantial amount of cheese not in the volume of his survey. It said, I have in my testimony, what was it, 50 or 45%.
Q. But that doesn't necessarily mean large ones didn't participate, did it?
A. No, but it means that a substantial amount of volume of all those plants was not represented.
Q. But your testimony was that large processors did not participate.
A. I'm sure some of those processors are very large. I mean, we have heard of very large co-ops that did not participate that produce cheese.
Q. You have heard, what --
A. I believe DFA did not participate, and they produce cheese.
Q. Do you know if they are large compared to these other entities for their plants?
A. I do not have the volumetrics on the top of my head.

Q. And speaking about motivations to participate or not participate, since DFA opposes IDFA's proposal, your own surmise about intentions for not participating could lead to a negative inference that if they participated, their costs would have been higher, correct?

A. Can you repeat the question?

Q. You, in your statement, and in response to Mr. Rosenbaum, discussed what you viewed as an "unfortunate" -- I'm sorry. I apologize. I went to the previous paragraph.

"Manufacturers to be selective in their choice to participate." Given the fact that DFA opposes the IDFA proposal, isn't it a logical conclusion that had they participated, their higher costs would have raised the survey results?

A. If they participated and they had higher cost data that went into the survey, yes, it would have, hypothetically, increased those numbers.

MR. ENGLISH: I have no further questions.

CROSS-EXAMINATION

BY MR. MILTNER:

Q. Good morning, Mr. Munch.

A. Good morning.

Q. I'm Ryan Miltner. I represent Select Milk Producers. You knew that.

Three areas that I think I wanted to ask you about, and I wanted to start on page 4 of your testimony, the second paragraph from the bottom. And you -- you

speak about handlers who diversify their operations, a tactic that many farmers are told to use to protect against revenue uncertainties.

So my first question on that sentence is, tell me a little bit about the farmer side of that equation because I'm not sure -- not sure what you fully intend to convey there.

A. Right. So the main point of the inclusion in that sentence is, our farmers have often reported to us that, you know, one of the things that they are told by processors, by, you know, consultants, by other experts or, you know, people providing advice to their operation, is that if they want to protect against revenue uncertainty, then they should diversify their operation. And that could mean maybe investing in on-site bottling. Maybe that means growing a different crop. Maybe that means now you grow your own feed, or you invest in higher technology, or you increase your variety of products sold, you add a farm store.

So they are told often that they need to invest in this diversification on farm to protect against revenue uncertainty.

The main -- the main point to include in that sentence is that we believe processors should also be held to the same standard, if they want to, you know, protect against revenue uncertainty, like farmers, they should have to do the same sort of diversification to compete.

Q. So now on the processor side, have you been here

or listening to most of -- most of the hearing testimony?

A. I was here all of last week and the first three days. I have been in and out listening the rest of the time.

Q. Okay. So do you recall any processor that did not have some sort of diversification in their products produced?

A. I believe most testified on the fact that they can produce other products. So I believe many have diversified. There are some very large and, you know, recently that, you know, they -- they specialize in particular commodity products, and we have heard many of those testify that they are restricted by the system. So when I speak of this, those are sort of some of the ones that I'm speaking about specifically.

Q. The secondary I wanted to ask about related to the timing of any mandatory survey, and I think you have -- Mr. English asked a good bit about that. But is it -- is it your testimony that once the Farm Bill is passed, and the regulations and procedures are adopted, you would expect it to be a two-year process to -- from the beginning of plant surveys until -- until a change was adopted or until a hearing could begin to confirm those changes?

A. I believe the intention was for when a hearing would begin, they could collect that data within that time period.

Q. Okay. So I'd now like to ask you some questions

about the various studies on Make Allowances that have been discussed that were presented at this hearing.

And so where I wanted to start was by asking you, as an economist, is there a difference in your mind among these three terms, which have all been talked about: A survey, a sample, and a census?

A. There is a difference. I mean, a sample is the sample of thing that you are surveying. A census, you are utilizing a much broader subset of data. I mean, Census of Agriculture is one that I'm in every single day. I don't have the exact definitions, but they are different.

Q. So I mean, when you are doing a -- when you are trying to obtain data about a population, am I correct that a census is intended to gather that data from every member of that entire population?

A. To my knowledge, I would not disagree with that.

Q. And then if you are going -- if you are surveying -- or if you are gathering data from a smaller set of the total population, would that be a survey?

A. I would not disagree if that's the definition you found.

Q. Okay.

A. I believe that a survey can be of the majority of a population. So it kind of depends on the situation.

Q. It could be a majority but -- but a subset of the total --

A. Right.

Q. -- population?

A. It kind of -- yeah. You could have a very small population and have the bulk of it within a survey, just because of that's how the project works out. But, yes, I agree with that characterization.

Q. So if you wanted to obtain the best information about the total population, between a census and a survey, if you are looking at this for economic analysis or other purposes, which of those two is going to give you the most reliable outcome?

A. Census.

Q. And was the California data, to your knowledge, a census or a survey?

A. I believe it was a survey.

Q. You believe it was a survey?

A. Yes.

Q. Okay. Within the world of surveys, when you are going to select a sample, are there -- are there benefits to taking a random sampling or a stratified sampling versus just opening the doors to whoever wants to participate?

A. Yes.

Q. What would -- in terms of the validity of the results, what -- as an economist, what are the benefits to a random sampling versus just opening the doors?

A. It gets rid of potential for bias. I mean, that's the main reason.

Q. And what about --

A. In your sample size.

Q. And what about a stratified sampling versus just opening the doors?

A. It kind of allows you to see different subsets of -- in sort of an unbiased manner.

Q. There were some questions asked of you about Dr. Stephenson's report from the 2006, 2007 hearings. Those, as I believe Dr. Stephenson testified, were stratified samples from his pool of data. And the 2023 report was one where it was by invitation to a subset of the population.

Now, putting aside the fact that there are two very different time periods, as an economist, would you find one of those two approaches more or less valid than the other?

A. I mean, I'm not intimately aware of the methodologies, but the stratification piece is preferred, I would say.

Q. And so if in relying on a stratified survey versus one that was non-stratified, and you were a regulator, would you feel quite as comfortable relying on one over the other?

A. I mean, I believe the stratified data is more appropriate as a basis. But, again we're in support of a mandatory audited survey amongst all processors. That's AFBF's position. So I don't really want to comment on if USDA has to decide, well, you know, which -- because that's our stance. That's where our members stand.

MR. MILTNER: I think that's all the questions I

had. Thank you.

THE WITNESS: Thank you.

THE COURT: Questions from anyone else?

AMS -- oh, I'm sorry, Ms. Hancock.

CROSS-EXAMINATION

BY MS. HANCOCK:

Q. Let's see. Good morning, Mr. Munch. I just want to first start off by thanking you for your level of professionalism and maintaining your professional demeanor throughout your examination. I think it's important for this process that we do that.

You had some questions about whether you were aware of Land O'Lakes' testimony on -- on its increases to its own Make Allowance.

Do you recall those questions?

A. I do.

Q. And were you here when Mr. Edmiston testified?

A. I was not, but I might have been listening.

Q. Okay. Mr. Edmiston testified that Land O'Lakes had experienced an increase in its own Make Allowances and the percentages that it provided with respect to its own increases.

Is that how you understood the percentage to increase to be characterized to you in your questions?

A. Not specifically, no.

Q. Okay. And I'll represent to you that Land O'Lakes never testified about how much, if any, its own costs had increased over the current ly set Make Allowance.

Does that make sense what I'm comparing there?

A. Yes.

Q. And we did ask some other IDFA members at what point in time their costs had exceeded the currently set Make Allowance.

Were you here for that testimony?

A. I was, yes.

Q. And did you hear them say that it was within the last four years?

A. Yes.

Q. Would that suggest to you that if the Make Allowances haven't been increased in 15 years, and it was only the last four years that -- that their actual costs had exceeded the Make Allowance, that they enjoyed the benefits of the profits that they could obtain by beating that Make Allowance for 11 years?

A. That would make sense.

Q. Would it also suggest to you that perhaps 15 years ago, those Make Allowances numbers were set too high?

A. I would not disagree with that.

MS. HANCOCK: Thank you. That's all I have.

THE COURT: Yes, Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum from the International Dairy Foods Association.

I take it you have not examined the Land O'Lakes --

A. I have not. I'm not intimately familiar with either of the questioning or --

Q. So if, in fact -- so you are not in a position to say whether in fact that exhibit explicitly says that he's tracking costs as compared to the Stephenson 2007 survey?

A. I am not familiar enough with the testimony to make -- but I feel like the record will stand for itself.

Q. Or to the 2008 Make Allowances, you don't know what -- whether he -- that that's what the document shows?

A. No. Not off the top of my head.

MR. ROSENBAUM: That's all I have.

THE COURT: AMS?

Should we take -- we have been going an hour and a half, I guess. Should we take a break of ten minutes? Let's come back at 9:40.

(Whereupon, a break was taken.)

THE COURT: Let's come to order. Let's get started.

AMS.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good morning.

A. Good morning, Erin.

Q. I want to thank you for being flexible from last week and coming back to testify today. So thank you very much.

A. Thankfully there's lots of flights from DCA.

Q. I really don't have a lot of questions for you

that haven't been asked.

So you -- I do have a few.

On page 3, the paragraph before the chart, you talk about using different -- the different surveys that have been done in the past. "This is more art than science, and USDA was put in the difficult position of applying such art in the past."

I was wondering if you could just talk a little bit about what you mean there for the record.

A. Yes. So, to my knowledge, when they -- Make Allowances were last adjusted, USDA basically -- I mean, like you are doing now, is pull this different information from what's been presented, and all the other information that's been on the record, and make a final decision. So we're kind of characterizing that as an art of what's the best method to do that that results in the most optimal conclusion or -- or proposed rule.

Q. Okay. And your preference, as you said throughout, is instead of doing that, is an audited mandatory survey?

A. Right, have that information based on that.

Q. Okay. On the same page, Chart 2, you had a note at the bottom of the chart: "'CDFA 2016 Whey' is the CDFA 2016 NDM plus current difference."

Could you explain what that is? What the current difference is?

A. I have to be honest, that was a Roger plop in, so...

Q. Okay. Well, if Roger gets up on the stand later, I'll put a note to ask him that question.

A. I apologize. I should have clarified that.

Q. No problem.

On page 4 in the middle, that big paragraph in the middle, you are talking about, generally, the amount of commodity that is covered by the NDPSR. You say in the one sentence, 10% of butter, about 10% cheese, 28% of whey, and 52% of nonfat dry milk is captured in the NDPSR.

Just could you illuminate what you used to get those calcula- -- get those percentages?

A. Yes. So for those ones in particular -- are those ones -- I believe since 2000 I used -- when NASS covered the survey, I took that volume, and then I used once it switched over to AMS, I took that volume, and then divided what's in the NDPSR survey volume by each of those categories. The cheese ones included both the 40-pound and obviously 500-pound barrels, against all cheese.

Q. And "all cheese" being the NASS all cheese volumes?

A. Yes.

Q. Okay. So it is NDPSR over the NASS numbers?

A. Correct.

Q. Okay. And then on the last page of your statement, when you are talking about a note on using input price indices, in the middle it says, "Over time, input price increases tend to be at least partially offset by productivity increases."

Could you just explain a little bit more about that?

A. Yes. So as -- as technology advances, as, you know, you have new optimal workplace processes depending on the particular operation that you have, a lot of those efficiencies offset some of the inputs that you have. So in -- in many cases you will see sort of a deflation in certain costs associated with the same amount of effort by a particular amount of labor.

Q. And -- sorry.

A. No, you go ahead.

Q. So in using those indices, then it's your position that those efficiencies aren't captured fully because you are still using the energy index, for example, or --

A. Right.

Q. But I ask because I think I have heard previous testimony that tends to say that those efficiencies are captured in the labor index. But you would argue not fully?

A. Well, and -- and particular in Dr. Schiek's study, he uses broad indices instead of specific indices, such as dairy plants, so there's a concern there. But also, just broadly, we have policy opposed to indexing just because we don't believe that it takes in all the factors into consideration.

Q. Okay. That is a Farm Bureau policy position?

A. Yes.

Q. Okay.

A. That is directly from our book.
Q. Okay. Thank you.
And just one last question for clar- -- to clarify. Farm Bureau supports an audited mandatory cost survey?
A. Correct.
Q. But that is not a proposal here at this hearing that's been discussed.
So do you have a position or are you not having a position on Proposals 7, 8, and 9?
A. We oppose those proposals.
Q. You do oppose them all?
A. Yes.
Q. Okay.
MS. TAYLOR: That's it from AMS. Thank you.
THE COURT: Redirect.

REDIRECT EXAMINATION

BY DR. CRYAN:
Q. Roger Cryan for American Farm Bureau Federation.
Thank you, Mr. Munch, for your testimony.
I would like to thank Mr. English for pointing out the error. As you said, that was -- that was my assignment. That chart was my assignment, and that's an error. That number is a cent higher.
But would you -- does that change -- change the testimony in any -- in substance?
A. No. The change in the number, you are saying?
Q. Right.

A. No, we think it still reflects what was found and determined in that survey.

Q. Because it is a matter of principle, not a matter of the individual number?

A. Correct.

DR. CRYAN: And just for the record, this is -- this testimony was a joint product. It is -- it could have been equally delivered by Mr. Munch or myself, but it had the stamp of each of us.

BY DR. CRYAN:

Q. Are you accusing anyone of lying or deliberate deception in any part of this process?

A. I am not.

Q. I think it's from the record, the -- from the record, from the previous hearings, from this record, it is relatively clear that when Dr. Stephenson collected data in 1998, there was -- there was a -- it was based on a tradition of benchmarking.

And as -- as time goes on and folks presumably begin to understand more and more that it is going to be used for regulatory purposes, how would you describe the way survey results change based on the understood purpose of the survey?

A. You mean -- no. As sort of referred to earlier, depending on what a plant might see as an optimal result in sort of their long-term revenue goals or how that impacts their individual business, they are going to choose whether or not to par- -- I mean, obviously, a

plant with a very high cost, they have a strong incentive to participate because they want those numbers reflected, and they want the highest costs that they have to be reflected.

On the other hand, there is incentive for the lowest cost, highest efficiency to not participate or to present numbers on the lower spectrum in their books.

So it really just comes up as, you know, there is a strategy, people are going -- you know, this is -- you know, people are trying to make money, and this is a regulatory consideration that impacts the bottom line. So they are going to choose to participate and choose to the extent of which that they participate depending on their intended goals and...

Q. So if you have a voluntary survey, it is not -- it's a reasonable business decision for a plant to choose to participate or not to participate?

A. I believe it is.

Q. And it doesn't represent -- that's not a lie or a deception, it is simply a business decision to engage in something or not?

A. Correct. It is a voluntary survey. Nobody is forced to participate, as with any voluntary survey.

Q. There's been some talk about the proceedings in 2006 and 2007.

At that time, surveys by Dr. Stephenson were used, but the CDFA numbers were available.

And what did that -- what did that mean in terms

of the application of the Stephenson results?

A. So I believe USDA was utilizing the CDFA survey as sort of a check to the voluntary survey to make sure the numbers were in -- in -- in an appropriate range. So you are using the improved preferable methodology that we believe is preferable to the voluntary survey.

Q. You talked about in the survey -- in the testimony, you talked about the temptation for creative activity.

Would you say that has an impact on the perception of the proceeding, whether anyone succumbs to the temptation or not?

A. Right. So, you know, our farmers have expressed extreme concerns over, you know, the reporting in these voluntary surveys. It doesn't mean that the numbers are wrong. That's not what we're saying. There is a concern and there is perception that people are being deceptive. And I think that's the problem that our members have. And having an audited survey gets rid of -- you know, gets rid of that perception, gets rid of the chance for people to be deceptive. So that's really what our farmers want is an assurance. It is not saying that the numbers aren't right now. It is saying that now we know the numbers are right, and we can go to our farmers with confidence that they are right. And I think that's an assurance that they deserve.

Q. The -- there was previous testimony, I believe it was by Mr. Edmiston, that their co-op farmer members were

asking them not to go too far repeatedly, that they -- that that was a message they heard a number of times. And I don't think it was only Mr. Edmiston. And then I asked whether in seeking these changes they tried to find the highest make increase -- the highest make that they're assured isn't too high.

Would you say this is -- this is kind of the objective in suggesting the CDFA numbers as an alternative?

A. Yes. You know, we're looking at a decision that even at the smallest percent of being off has a large magnitude impact on our farmers' bottom lines. And some of our farmers from last week, like Brian Henrichs, he answered a question that said even a 1 to 2% difference in the Make Allowance has an extreme impact on their bottom line.

So we want to make sure whatever numbers are utilized are definitely not too high, and given the -- you know, the timing and the methodology behind that CDFA survey, we are under the understanding that currently it is not too high.

Q. And finally, Mr. Miltner asked some questions about surveys and the nature of surveys and stratification and random and self- -- self-selected, and the -- and the concept that you kind of were walking around was self-selection bias.

Would you talk about self-selection bias a little bit?

A. Yeah. So self-selection bias is really, you know, when a particular population or group decides to participate in a survey, and that's what happens when you have a voluntary survey. You know, they might find some sort of benefit out of having the information. It could just be benchmarking, or it could be -- and, you know, we argue that it could be to skew data or just have excess data. And folks might not participate for the opposite reason.

So any sort of situation or surveying situation where people are choosing based on a decision or an outcome or to have information to participate, you have the self-selection bias, which negatively impacts the quality of the results.

Q. Thank you.

DR. CRYAN: And I believe this is when I ask for the exhibit to be recognized --

THE COURT: Yes.

DR. CRYAN: -- as -- what was the number?

THE COURT: Exhibit 222.

Any objections?

Seeing none, Exhibit 222 is admitted into the record.

(Thereafter, Exhibit Number 222 was received into evidence.)

DR. CRYAN: Thank you, your Honor. That's all for me.

THE COURT: Okay. You are dismissed. Thank

you --

THE WITNESS: Thank you.

THE COURT: -- Mr. Munch.

MR. MILTNER: Your Honor, we would call Steve Cooper to the stand.

THE COURT: Please raise your right hand.

STEVEN COOPER,

Being first duly sworn, was examined and testified as follows:

THE WITNESS: Good morning. My name is Steven Cooper. I'm the president and chief operating officer of Continental Dairy Facilities and Continental Dairy Facilities Southwest.

DIRECT EXAMINATION

BY MR. MILTNER:

Q. Thank you, Steve.

Before we go further in your statement, which you have got in front of you, and at the top that's marked Exhibit Select-5, correct?

A. Correct.

Q. And you have seen this before?

A. Yes.

Q. This is the testimony that you have prepared on Select's proposal regarding the nonfat dry milk yield, correct?

A. Correct.

Q. Could you -- you have given your name, but could you spell your name for the record and then give your

business address as well.

A. Steven, S-T-E-V-E-N, Cooper, C-O-O-P-E-R. Business address is 999 West Randall Street, Coopersville, Michigan, 49404.

Q. And Randall was R-A-N-D-A-L-L, correct?

A. That is correct.

Q. So if you would go ahead and give your introduction, and then I'll have some questions for you, and then we can finish giving your statement. Okay?

A. Okay.

THE COURT: Let's go ahead and mark Select -- Exhibit Select-5 as Exhibit 223 for identification.

(Thereafter, Exhibit Number 223 was marked for identification.)

MR. MILTNER: Thank you, your Honor.

THE COURT: You may continue, Mr. Cooper.

THE WITNESS: CDF operates a butter/powder plant in Coopersville, Michigan, and CDF Southwest operates a butter/powder plant in Littlefield, Texas. Both CDF and CDF Southwest are wholly-owned subsidiaries of Select Milk Producers, Inc.

I have a Bachelor of Science degree in dairy science and technology from California State University Fresno, and before earning my Bachelor's degree, I earned an associate's degree in dairy production from Mount San Antonio College in Walnut, California. I have worked in the dairy industry either on a dairy farm or in dairy manufacturing since I was 16 years old.

Following my graduation from Fresno State, I worked for three years as an assistant plant manager with Sonoma Cheese, and I was then hired by California Milk Producers, which is now California Dairies, Inc., as a cheese plant supervisor, working in a plant manufacturing 40-pound block cheddar cheese.

And for the last 15 years of my time with CDI, I worked in its butter/powder plants, ultimately holding the title of vice president of manufacturing operations, where I had oversight responsibility of CDI's manufacturing facilities.

I joined CDF in 2009, initially working with Continental Dairy Products, Inc., a cooperative that has since been merged with Select, and I was hired to work with Continental as they were designing and building a new Class IV balancing plant to serve its owner producers in the Midwest marketing area. I was involved in the design, construction, and commissioning of the plant, and have been its general manager and COO since its inception.

In 2015, after Continental had merged into Select, I served the same role in designing, constructing and commissioning and operating a sister plant in Littlefield, Texas to serve Select's owners in the Southwest Marketing Area.

I am ultimately responsible for all dairy -- or daily operations at both CDF and CDF Southwest, including product manufacturing, milk sourcing, product sales, and food safety. In conjunction with Select's management and

our producer directors, I'm also responsible for short-term and long-term strategic planning for both facilities and related activities of the cooperative.

BY MR. MILTNER:

Q. Thank you.

So in -- in total, Mr. Cooper, how many years now have you spent working in dairy manufacturing?

A. In manufacturing, alone? 47 years.

Q. And during that time, what types of facilities have you worked in in terms of the types of products they produce?

A. I started off in cheese, working in an artisanal-style cheese plant in Sonoma, doing artisanal cheeses. And then went to a block cheddar manufacturing operation at California Milk Producers. And then from there, went into butter and powder. And then the facilities I've worked in have also produced cream, condensed, ice cream mixes.

Q. And how much of your time has been in the butter/powder plant part of that equation?

A. Most of my career. So all about -- except for the six years I was in cheese, probably 40-plus years in butter/powder.

Q. And the most recent 40 years, consecutively dealing with --

A. That's correct.

Q. -- butter/powder operations?

A. Yes.

Q. Do you also serve on any industry committees?
A. Yes, I do.
Q. What are those currently?
A. I serve on ADPI, IDFA, U.S. Dec, Dairy Products Institute of Texas. I think that's it.
Q. And is Continental Dairy Facilities or Select Milk Producers a member of IDFA?
A. Continental Dairies is a member of IDFA.
MR. MILTNER: Your Honor, we would ask that Mr. Cooper be recognized as an expert in the area of dairy product manufacturing.
THE COURT: Any objections?
I find this witness to be an expert in that area.
MR. MILTNER: Thank you.
BY MR. MILTNER:
Q. Mr. Cooper, if you would go ahead and present the rest of your testimony. And just for our court reporter's sake, if you can slow down just a touch. We have all had the tendency to read at pace, and it's hard for her to take it all down. So thank you very much.
A. I'll slow it down.
The scope of my testimony today is related to the production and sales of butter/powder in both the Michigan CDF plant and the Texas CDF Southwest plant. In addition to the analysis presented in this testimony, I have reviewed and am familiar with testimony of Chris Allen on this proposal, and my testimony is intended to supplement and build upon his.

Both the Michigan and the Texas plant produce a variety of products. The predominant products produced are nonfat dry milk, butter, and buttermilk powder. Depending on market conditions, the plants will also produce condensed skim milk, whole milk powder, and bulk cream.

I was asked by Select to analyze and provide testimony on the sales prices of low-heat nonfat dry milk and buttermilk powder for the period of January 2021 through June 2023. Specifically, I was asked to analyze the alignment of these prices at each plant for each month in that period. I was also asked to discuss the costs of manufacturing low-heat nonfat dry milk compared with buttermilk powder.

CDF and CDF Southwest maintain records of the prices received for all products sold, both on an individual sale basis and aggregated data for the purposes of internal reporting and analysis. I asked my staff to compile the sales data described above for each facility. I was provided the monthly average sales prices for low-heat nonfat dry milk and buttermilk powder at each plant. That data was then compared monthly for the entire period.

Included in this statement are a series of tables and graphs. The first table lists for the CDF Michigan plant, for each month, the price received for buttermilk powder as a percentage of the price received for low-heat nonfat dry milk in the same month. The average, maximum,

and minimum is also reported. Over the observed period, buttermilk powder prices averaged 96.72% of nonfat dry milk prices. The maximum buttermilk powder price was 115.54%, and the minimum was 82.51%.

The second table provides the same information for the CDF's Southwest Texas plant. Over the observed period, buttermilk powder prices averaged 96.59% of nonfat dry milk prices. The maximum buttermilk price was 114.67%, and the minimum was 82.89%. In certain months, the plants did not sell any buttermilk powder. No data is reported for those months.

As an aside, for those months where no buttermilk powder was sold, I compared the Dairy Market News reported price relationship between low-heat nonfat dry milk and buttermilk powder. For the four months when CDF did not sell buttermilk powder, the price relationships for the Central/Eastern reports were 95.90%, 89.17%, 119.18%, and 120.88%.

For the four months where CDF Southwest did not sell buttermilk powder, the price relationships for the Western reports were 90.59%, 94.44%, 96.45%, and 82.46%.

We present this data to demonstrate that the decision not to sell buttermilk in those months was not a function of a weak buttermilk market relative to nonfat dry milk. I also note that the four months that CDF did not sell buttermilk powder are not the same four months when CDF Southwest did not sell buttermilk powder.

The next graph shows the buttermilk price index on

a month-to-month basis for CDF Michigan. The next page also shows the relationship for Continental Dairy Facilities Southwest.

Related information is presented graphically. The first graph plots the monthly sales price of buttermilk powder for the Michigan and Texas plants expressed as a percentage of the nonfat dry milk prices for the plants. You will see close alignment in months where both plants sold buttermilk powder. Graphs 2 and 3 plot the nonfat dry milk price for the Michigan plant against the prices for the Texas plant and the same analysis for buttermilk powder. Again, you will see a close alignment between the two plants.

In addition to examining the sales prices of nonfat dry milk and buttermilk powder, I also examined the plants' manufacturing costs for low-heat nonfat dry milk and buttermilk powder.

I note that neither Continental Dairy Facilities nor Continental Dairy Facilities Southwest participated in the price surveys conducted by Mark Stephenson or Bill Schiek. The reasons for our decision not to participate will be testified to separately when Select addresses Proposals 7, 8, and 9. Nor will I discuss during my testimony the actual manufacturing costs of CDF or CDF Southwest for nonfat dry milk or buttermilk powder.

However, I did examine whether the stated manufacturing cost relationship noted by USDA during order reform was accurate in my experience and in the operations

of CDF and CDF Southwest. The order reform decision found that it costs $0.02 more to make buttermilk powder than to make nonfat dry milk powder. The actual process of drying buttermilk and drying skim milk are essentially the same. We utilize the same equipment and processes to make both products.

The only difference is that it takes somewhat longer to dry buttermilk than to dry skim milk. That additional drying time requires additional natural gas. While the specific additional cost would vary directly with the actual costs of natural gas, the incremental fuel cost to CDF and CDF Southwest in 2023 would be approximately $0.02.

For both the CDF plant in Michigan and the CDF Southwest plant in Texas, the actual prices received for the sale of nonfat dry milk and buttermilk powder are closely aligned. In addition, in no month was the price for buttermilk powder more than 18% less than the prices received for nonfat dry milk. And for CDF and CDF Southwest, the reality is that buttermilk receives nearly the same price as low-heat nonfat dry milk.

The prices received for nonfat dry milk produced in Michigan and Texas, as well as the prices received for buttermilk produced in each location, are also aligned. There is very little difference between the prices received for either product that could be attributed to geography. Those differences that do occur on a month-to-month basis are virtually nonexistent on an

annual basis. There appears to be little regional difference in the prices received.

The price information from Continental Dairy Facilities and Continental Dairy Facilities Southwest is consistent with the Dairy Market News data comparing nonfat dry milk and buttermilk powder prices in both the Western market and the Eastern/Central Market. The average of the buttermilk powder price relationship of 97.5% testified to by Chris Allen is consistent with the CDF/CDF Southwest price relationship of 96.7%.

CDF and CDF Southwest's costs to manufacture buttermilk powder is higher than the cost to manufacture nonfat dry milk. That additional cost is due to additional drying time and associated fuel. Although the costs will vary with natural gas prices, the Department's estimate that the make costs for buttermilk powder are $0.02 higher than the make costs for nonfat dry milk are appropriate.

Q. Thank you, Mr. Cooper.

A. Thank you.

Q. So I'd like to ask you a few more questions about your statement. And I would like to start actually with something you stated on page 8, where you stated the reasons for our decision not to participate in those surveys will be testified to separately.

Now, Select may have a statement at the end of the proceeding addressing all the proposals in which that issue would be addressed, but since you are here, and we

can talk about it, I thought I would ask now.

Dr. Stephenson's study that was conducted in 2018 or so, do you recall receiving an invitation to participate in that survey?

A. Yes.

Q. Did you participate in that survey?

A. No, we did not.

Q. And was the reason for your participation that it wasn't a full census of all applicable plants, that all plants would be required to participate in?

A. That, and it wasn't a mandatory, so we chose not to participate.

Q. Do you recall if your plants were invited to participate in the 2023 update to those surveys that IDFA had commissioned?

A. I believe we were.

Q. And did you participate in those studies?

A. No, we did not.

Q. Was the reasoning the same?

A. Yes.

Q. Now, I don't want to ask about their operations. But when you worked for CDI, did CDI participate in those -- in the surveys of the California Department of Food and Agriculture?

A. Yes.

Q. And why did they participate in those studies?

A. Because they were mandatory.

Q. Did you have a concern about the conclusions that

were drawn by the California surveys when you worked for CDI?

A. No, I did not.

Q. Would you have a concern with another survey that was neither mandatory nor comprehensive?

A. I would. The California surveys were mandatory, and they were audited, and they were very detailed. I participated in them. So I know that they were extremely detailed and -- I -- if another survey was done the same way, I would -- I would participate in it, but if it was not done the same way, I would not.

Q. I'd like to ask also about the production of buttermilk powder at your two plants.

Now, you testified that in some months there was no buttermilk powder sold.

A. Correct.

Q. Now, why would that occur?

A. In those months we did not produce butter. We looked at cream, and we run a formula based on cream where we sell cream as fluid cream or we sell -- if the multiples are high enough, we'll sell the majority or all of our cream for fluid cream. If the -- if the multiples do not dictate that it's a good enough return, we'll run butter. We typically run butter in months where the multiples don't support selling fluid cream. We put that butter away, and we use it for our retail operations.

Q. So I think during the course of this hearing there may have been a couple passing references to cream

multiples but -- so the record is clear, can you share with us what a cream multiple is?

A. Basically a cream multiple reflects the market conditions for the cream. So we take the CME butter price and we take it times a multiple based on market demand. And if we see that that return on -- and we take buttermilk into that process as well. We look at the return on buttermilk -- on the cream and on butter, and we look at what brings the best margin to the plant. And we make a decision whether we move that to fluid cream or we move it into the butter operations.

Q. So let me walk through this, kind of step by step and make sure that we have got this correct.

So raw milk arrives at one of the plants, and you skim that -- that raw milk, correct?

A. Correct.

Q. And the skim then becomes nonfat dry milk, correct?

A. Correct.

Q. And that for the most part happens every day?

A. Correct.

Q. The cream then, you and your team make a decision about the best economic outlet for that cream; is that right?

A. Yes, we do that.

Q. And when the cream multiple is high enough, the economic decision is to sell the bulk cream; would that be right?

A. That is correct.
Q. And at a lower multiple, the better economic decision is to make butter, correct?
A. Correct.
Q. So if you are not making butter, there's no buttermilk to dry; is that right?
A. That's correct.
Q. So -- now, when you do make butter, do you -- do you always make buttermilk powder?
A. Most of the time we make buttermilk powder, but we have made buttermilk condensed. If the market conditions are better to sell buttermilk condensed, we'll sell buttermilk condensed, but that's very seldom.
Q. Now, you have had a chance -- I don't know if you -- I don't think you were here when Chris Allen testified yesterday. I think you were still in transit, correct?
A. That's correct.
Q. He, in his testimony -- which I think you have seen -- he talked about how the relationship between the price of buttermilk powder and the price of nonfat dry milk has converged, I suppose, over time.
Given your experience in dairy product manufacturing and sales, do you have any observations or reasoning as to why that price relationship might have changed?
A. Yes. Buttermilk used to be used primarily in baking, and it was really kind of a byproduct of butter

making. In recent years, the food industry has realized the attributes and nutritional attributes of using buttermilk powder in formulations, such as infant formula. One of our biggest customers is an infant formula customer for buttermilk powder.

And what we used to sell buttermilk powder for was a very -- at times, very, very cheap. We would lose money on it. Now we're seeing a relationship where buttermilk powder is, at times, more valuable than nonfat dry milk because of the food industry starting to see those nutritional attributes in buttermilk powder and nutritional products, and they put formula in other things rather than just baking.

Q. So the demand profile for that product has changed over the last 20 years or so?

A. Yes.

Q. The difference --

A. Especially in the last two to three years, that demand -- that demand profile and the pricing has changed dramatically.

Q. Now, based on the fact that the solids in buttermilk or buttermilk powder are not included in the price formulas right now, other than the cost to process the buttermilk, does that represent pure profit to your plant?

A. It certainly helps it. I'm not sure how to comment on that.

Q. You can stick with "it helps," if you like.

A. Yes.

Q. And just a couple of things to clarify in your statement, as you have presented it.

On page 4 and page 5, where you see the word "null," are those the months where there was no buttermilk sold by the plants?

A. That's correct.

Q. And then on your graphs on page 7, there is no legend for the Y axis. And I understand that is because you did not want to particularly peg the exact sales prices on that -- those graphs; is that correct?

A. That is correct.

Q. Okay. So I have one more question for you, and it relates not so much to this statement, but to a question that was asked of Ms. Stehouwer yesterday. And it has to do with the component tests of the farm milk coming into your plants and the component tests of the silos at your plants.

Now, I'm not asking you for the numbers themselves, but she stated that the -- those numbers, whatever they are, are aligned, that the components you realize from the farm tests are the same components you realize when you test your silos.

Is that your experience?

A. Yes. We track that, and we are very confident that those are aligned.

Q. Now, similarly, through whatever other measures you utilize in making products, to the extent there are

solids losses through the process, do you find that butterfat losses exceed those of solids in total?

A. No. We -- we have set KPIs that we look at and the plant is measured on, the management staff is measured on. We have set guidelines for solids nonfat, and we have set guidelines for butterfat. And the butterfat solids -- the butterfat losses that are acceptable are lower, the standard is lower than the -- on a percentage basis than solids nonfat.

Q. So when you are comparing farm components and silo components, they line up?

A. Yes.

Q. And then once you start processing, you find that solids -- other solids are actually lost at a higher rate than butterfat. Is that what your experience is?

A. That's my experience, yes.

Q. Okay.

MR. MILTNER: Your Honor, I don't have any other questions, and we would make Mr. Cooper available for questioning from others.

THE COURT: Questions for this witness?

Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum for the International Dairy Foods Association.

You testified that you chose not to participate in either the 2019 Stephenson survey or the 2022 Stephenson

survey; is that correct?

A. That is correct.

Q. So we have heard testimony that the 2023 Stephenson survey of 2022 costs covered 91.2% of total nonfat dry milk production in the United States. I'd ask you to accept that number. Not -- obviously you're not in a position to verify that.

A. No.

Q. Would -- would Select be a material component of the -- of the seven -- excuse me -- of the 8.8% that didn't participate?

A. Most likely.

Q. Okay. Okay. And it was simply, if you will, a voluntary decision on your part not to -- not to have those numbers included; is that right?

A. Yes.

Q. Okay. And -- okay. Were you -- and I take it you were aware, obviously, because you got a specific invitation, that the results of the survey would be submitted as part of this Make Allowance hearing, correct?

A. Yes.

Q. And in also choosing not to participate in the survey of 2019 costs, had you been aware that Dr. Stephenson had actually been commissioned by USDA itself to -- to make that study?

A. At the time I was not, no.

MR. ROSENBAUM: That's all I have. Thank you.

///

CROSS-EXAMINATION

BY MS. HANCOCK:

Q. Good morning, Mr. Cooper. Just a couple questions.

You have talked about your plants that you have in Texas and Michigan. I'm wondering if you have -- well, and you also have some experiences at CDI, so with California plants as well; is that fair?

A. That is fair.

Q. So given your experiences, how representative do you believe that the California cost survey would be as extrapolated and applied to the rest of the country?

A. There are going to be some nuances, as was earlier discussed. Energy costs are higher in California. Labor costs are higher. Benefits are higher. All those things are quite a bit higher. We -- I have compared the California study to our -- our current costs that we see at our plants right now, and when you look at the subsets -- those subsets, there is a difference.

Q. And are you willing to share with us which way that difference goes?

A. Labor costs and energy are lower in the Midwest and in Texas than in California.

Q. And are you comparing it to that 2016 survey?

A. Yes.

Q. Okay. So even comparing 2016 to today, you still see some differences?

A. Some differences. They are very similar with

today's costs, especially since COVID, because all of our costs went up since COVID, especially in labor. To retain our people, we had to pay more in labor.

Q. Okay. Have you ever dumped your butterfat solids or your buttermilk powder?

A. Yes, we have.

Q. And how frequently does that occur?

A. As seldom as possible. We -- we know the value of buttermilk. The only time that we dump buttermilk is when we have a choice whether we're dumping milk on the farm because there's more production than the plant can handle. And since we're owned by a cooperative, we do not dump our members' milk. So at that point we make the decision to dump buttermilk to avoid dumping milk on the farm.

Q. Okay. And how frequently does that occur?

A. Not very frequently.

Q. Okay. Is it seasonal or due to some one-off situation?

A. It's seasonal, and it really is a decision made whether we can -- like I said, it goes back to how -- you know, what kind of -- what kind of volume do we have coming in from the farm, how much can we balance on a daily basis within the plants. We tend to run the plants at overcapacity as much as possible. So once we get to the overcapacity limits and we see that we can't handle the buttermilk, then we'll dump it. But we do that very seldomly.

Q. And that's because of the cooperative, you owe

your members a responsibility to take all the milk that they produce; is that fair?

A. That is fair. That is correct.

Q. And have you been able to honor that commitment to your members?

A. Yes, we have.

Q. When a butter plant purchases cream to make butter, how does that butter plant pay for the buttermilk solids?

A. Basically when we purchase cream, it is in the cream -- it's -- it's calculated in the cream price. So when we buy the cream either -- when we buy outside cream from others, because we do handle cream from others, that is based on the -- on the -- on the multiple that we pay for the cream.

Q. And you talked about finding the opportunity or the outlet for using the buttermilk powder for use in an infant formula. I know as a very protective mom I'm sensitive about what I put into my kids' bodies, and I know that there's lots of specifications. I'm just wondering if there are any additional or more strict classifications for manufacturing infant formula than you would have for other uses?

A. Yes.

Q. Can you share with us what those are?

A. It's a bacterial analysis is primarily what it is.

Q. So additional testing and monitoring?

A. Yes.

Q. Do you have to build any other features into the process to make sure that -- that you hit or achieve or exceed those bacterial thresholds for testing?

A. No. Basically the -- if the -- if the plant is doing everything it is supposed to be doing from a food safety standpoint, you do not have to build that in. So as long as you are adhering to a very strict food safety program, you don't have to do that.

Q. Okay. And I think you said this already. I just want to make sure I understood. On your -- on page 4 and 5 when you have tracked the indexes for your two plants for those sales, where you have a -- an index indicator there that says "null," that just means that you did not sell any -- any in that month?

A. That is correct.

Q. Okay. Can you -- can you share with us what volumes we're talking about here? I mean, is that a huge drop-off when you get to a zero or -- or is it kind of nominal sales up until that point so that it's not a huge drop at that point?

A. Well, it's usually a pretty good drop-off at that point, because our -- we have very large churns that when we produce butter, we produce quite a bit of buttermilk powder. There are some months when we will start ramping down. If we're looking at the months there, like August and September, usually, we'll start ramping down towards June, July. But that really depends on the demand for cream and how we start ramping down the butter plants.

Q. Okay. So those are just intentional business decision that you make as you ramp down in those summer months?

A. Yes.

Q. And then what about in this example on page 4, we're looking at for Michigan, you had -- June of '21 and November of '21?

A. Those were both months when we -- we weren't churning.

Q. Okay.

A. I mean, by the time we get to November, and usually into November, you know, the butter season is over because if you haven't fulfilled the pipeline with butter by October, it doesn't make it to the store shelves by Thanksgiving and Christmas. So in those months we'll start ramping down as well.

Q. Okay. So just seasonal responsiveness?

A. That's exactly what it is.

Q. Okay. And then I think you noted that you -- you try not to have an overlap between the months, in the same months, between Michigan and Texas. Was that right?

A. That's just random. It depends on the -- on the cream sales and the cream demand in those regions and butter demand in those regions.

Q. So it would be coincidental if it did overlap, not an intentional business decision?

A. That's correct.

Q. Okay.

MS. HANCOCK: That's all I have. Thank you so much for your time.

THE WITNESS: Okay.

CROSS-EXAMINATION

BY MR. ENGLISH:

Q. Good morning, Mr. Cooper. My name is Chip English. I represent the Milk Innovation Group.

So I was trying to follow along and at the same time was jotting down questions, so if I got lost, I apologize, but I also don't want to repeat from your questions from your counsel.

Is some fat lost from when farm level protein and fat components are first tested through the end of the cheese manufacturing system?

A. We don't make cheese.

Q. Do you know from your experience in making cheese whether fat is lost from farm level protein and fat components when they are first tested through the cheese manufacturing system?

A. I mean, you are asking me something I haven't done in over probably 40 years, so...

Q. Okay.

A. You know, technologies have changed quite a bit from when I was making cheese, so I --

Q. Well, I will move along.

A. -- I'll refrain from commenting on that.

Q. I apologize, I thought some witnesses seemed to get you to talk about cheese, so I thought maybe you had

more experience recent. But that's fine.

So for your butter plant, do you make Grade AA butter of the type reported to the NDPSR?

A. Yes, we do.

Q. Do you use any whey cream in that butter?

A. No, we do not.

Q. Is that because whey cream isn't treated as Grade AA?

A. That's correct.

Q. How much does whey cream sell for?

A. You know, we don't really participate in that market, so I don't -- I have no idea.

Q. Okay.

MR. ENGLISH: I have no further questions then. Thank you.

THE COURT: Further questions from anyone else aside from AMS?

Yes, Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum for the International Dairy Foods Association.

You made a comparison between California labor costs and labor costs where your plants are located, correct?

A. Yes.

Q. Do you -- do you pay at the minimum wage?

A. No, we do not.

Q. Do you pay substantially higher than the minimum wage?

A. Yes, we do.

MR. ROSENBAUM: That's all I have.

THE COURT: Seeing no one else, AMS?

CROSS-EXAMINATION

BY MR. WILSON:

Q. Good morning, Mr. Cooper.

A. Good morning.

Q. Thank you for coming and testifying today. This is Todd Wilson, USDA.

I have a few questions about -- about the -- your testimony and wanted to kind of dig into some of the information, expertise-wise, that you have.

So when we talk about the nonfat solids yield factor in our formulas, what -- what is it that you feel like should be included in that -- in that factor?

A. Specifically?

Q. Specifically should we be looking at all powders? Should we be looking at nonfat dry milk powders? Should we be looking at buttermilk powders?

A. Yes.

Q. All of the above?

A. (Shakes head.)

Q. Each one of those powders have different --

(Court Reporter clarification.)

BY MR. WILSON:

Q. I'm sorry, can you verbally respond?

A. Yes. I'm sorry.
Q. Each one of those products have unique yields inherent to themselves?
A. Correct.
Q. Do you have any information as to what those different yields should be?
A. We -- we follow those yields pretty closely, and, again, it depends on butterfat. It depends on the components. So your moisture in buttermilk powder is lower than your moisture in nonfat dry milk, so you are going to get a lower yield factor on buttermilk powder than you would on nonfat.
Q. So there's been some historical yield factors on buttermilk powder dating back to some earlier hearings that we had in the early 2000s.
Is it -- do you feel like those yield factors are still appropriate given today's environment and components and things?
A. I think they have to be looked at based on today's processing capabilities and the efficiency of today's equipment.
Q. The next question is, when you have 100 pounds of nonfat milk solids, you get 100 pounds of nonfat milk solids into your plant, do you track or do you know what should go into those products, how much is going into nonfat dry milk, how much is going into butter, how much is going into buttermilk powder?
A. We track it -- yes, we do track it. And -- and we

track on how much should go into powder, how much should go into either cream or butter. If it goes into cream, obviously, that -- the solids and the butterfat follow the cream. If it goes into butter, obviously how much gets into the butter and how much gets into the buttermilk powder, those yields are followed. We also calculate our plant loss. And then we compare -- that is basically what we put in our KPIs as to our plant performance.

Q. What would -- what is a KPI?

A. Key process indicators.

Q. Key process indicators. Okay. Thank you.

So do you have any -- I don't want to ask you for proprietary information, but do you have any information from an industry standard about if you had 100 pounds of nonfat milk solids, how much should go into making nonfat dry milk, how much should go into buttermilk powder? Is there a standard?

A. There's standards that I have used over the years based on my experience and based on my former employers as well, and that's -- and we look at those standards, and then we compare our -- we set our own standards as well. So we have our own internal standards that we set.

Q. Do you have any figures that you might be able to share with us from an industry standard, not a proprietary standard?

A. They are pretty close, so I would probably refrain from sharing those.

Q. So those are going to be out there in the public

domain?

A. They should be out in the public domain.

Q. That's what I'm looking for.

So a couple of questions by some other parties asked about how a butter/powder plant pays for their nonfat milk solids.

Is it your understanding that all nonfat milk solids coming into the plant are paid for at -- or valued at the Class IV nonfat solids price?

A. Right.

Q. Do you make whole milk powder?

A. No.

Q. You do not.

When Mr. Miltner was asking you about some of the prior testimony with -- with some plant accountants, there was some discussion with him about you tracking your solids losses versus your butterfat losses. Can you elaborate a little bit more about those -- about those two components and how you -- how they track, how you -- how your plant handles those?

A. Certainly. Basically it's -- from us -- our standpoint, we look at a mass balance. With milk coming in the door, we look at our inventories, we look at what we produce on a daily basis, and then we look at components. And then at the end of the day when we compare everything that's came in the door, what we have produced and the component levels, you know, what we're missing is our loss.

And so we track those. There's standards that I have always used in my career through former employers and -- and what we have established internally as to what's acceptable. Usually -- and I'll -- I won't give you our standards, but I can tell you, on a standards basis, if you look at butterfat losses as compared to solids nonfat losses, solids nonfat losses usually run about a percent higher than butterfat losses.

So we -- we set two guidelines, and the guidelines for our managers are, here's your acceptable butterfat loss, here's your acceptable solids nonfat loss. And if you exceed those, obviously it's going to affect your paycheck.

Q. Okay. On page 8 of your testimony, you -- in your -- in that middle paragraph, you talked about costs of making buttermilk powder versus costs of making nonfat dry milk, and you talked about the incremental fuel increase.

Could you talk a little bit more, elaborate more about what that -- what causes that? I'm thinking it's in the drying time, how long it takes more?

A. When we -- when we dry buttermilk, there's two things that affect our efficiencies there. When we go -- when we switch from nonfat to buttermilk, we have to have a purge time in between to where we have no product, so that we do not intermix the two products, because it's all dried on the same equipment. So that's calculated in it.

But the other thing that's calculated in is

because there's a higher fat percentage in the buttermilk than there is in nonfat. We have to run at a slower speed because it -- buttermilk has certain properties that are, I would say a little stickier, so you have to run a higher temperature and a lower throughput to the dryer to make sure that you do not plug your bag houses or plug your cyclones on a dryer that has cyclones.

So the components in the buttermilk dictate on how you dry -- how you run the dryer. Similar to whole milk. I have dried whole milk powder in the past. You run -- when you run whole milk versus nonfat, you lose 25% efficiency in your dryer because you have higher solids, higher fat, and it runs completely different.

So how that equipment runs between the two different products and the constituents in the product dictate on how you run. And when you run hotter, obviously, you have to run -- you to have burn more gas.

Q. So the 25% that you mentioned of decreased efficiency, was that whole milk powder?

A. Yes.

Q. What's that in relation with the buttermilk powder? What kind of inefficiencies do you experience?

A. It's not quite that much. It's -- like I said, we looked at that $0.02 cost price in there that was USDA established, and we agreed that was about the difference between the two.

Q. All right. Thank you.

MR. WILSON: That's all from AMS. Thank you,

Mr. Cooper.

REDIRECT EXAMINATION

BY MR. MILTNER:

Q. Mr. Cooper, just a few questions to tie up some things.

I understand your protection of confidential information. I do want to see if we can help with some yield data on buttermilk.

In its prior decision USDA stated that there are 0.0479 pounds of -- let me read this correctly -- let me just read it instead of trying to summarize it.

"According to the Economic Research Services publication, nonfat milk solids in dry buttermilk are 0.0479 pounds per pound of nonfat milk solids."

Does that sound reasonable to you?

A. Yes.

Q. And for every pound of dry buttermilk, there are 0.919 pounds of nonfat milk solids.

Does that sound reasonable to you?

A. Yes.

Q. So that is from a 2002 USDA Final Decision.

In the intervening 20 years or so, those numbers still sound reasonable to you?

A. They sound reasonable, but I think that it would -- it would bear being -- it would -- it would dictate we probably ought to look at it based on newer production facilities that are a lot more efficient. And we're capturing more -- more solids and more butterfat on

our equipment now than we ever have due to changes in technology.

Q. Okay. But it certainly wouldn't be less than what USDA said 20 years ago?

A. No.

Q. Now, if we just think about nonfat dry milk. If you take a pound of nonfat solids, and you dried it, would the yield be higher than 0.99?

A. Yes.

Q. Would it be reasonable for a plant of average efficiency to yield something more like 1.02?

A. Yes.

Q. And that's just on the nonfat dry milk part of it, correct?

A. That is correct.

Q. And that assumes that you skimmed off the cream, and all those solids that would end up in buttermilk powder are still there to be dried or condensed or utilized in some fashion?

A. That's correct.

Q. And when you -- okay, so -- and then last question would be, you -- you testified to it, and I -- you clarified it I think with AMS, but just to make sure it's completely clear.

That relationship of two additional cents to dry buttermilk powder, which was pulled from that same 2002 decision, that $0.02 difference, even in today's price environment to you, is still a reasonable difference

between the costs of drying those two products?
A. That's correct.
Q. Thank you.
MR. MILTNER: I don't have any other questions, your Honor. And I would move the admission of Exhibit 223.
THE COURT: Any objections?
Seeing none, Exhibit 223 is entered into the record.
(Thereafter, Exhibit Number 223 was received into evidence.)
THE COURT: Thank you, Mr. Cooper.
MS. TAYLOR: We have been going for about an hour and 15. Let's come back at 11:00.
(Whereupon, a break was taken.)
THE COURT: Let's come to order. I'll go ahead and swear in the witness, I guess.
Please raise your right hand.

NANA FARKYE,

Being first duly sworn, was examined and testified as follows:
THE COURT: Your witness.

DIRECT EXAMINATION

BY MR. MILTNER:
Q. Good morning, Dr. Farkye. How are you?
A. I'm well. Thank you.
Q. You may have to get a little closer to the mic, mostly so that our folks listening online can hear you.

Before we get going, could I ask you to give your name, spell it, and then give your business address, please?

A. My name is Nana Farkye or Farkye. People say it in different ways, but I prefer Farkye. Nana, N-A-N-A, Farkye, F as in Frank, A-R-K-Y-E. Business address, 2929 Floyd Avenue, Number 330, Modesto, California, 95535.

Q. And, Dr. Farkye, do you have two documents with you, one of them at the top reads Exhibit Select-7 and the other in the upper right reads Select-8? Do you have those with you?

A. That is correct.

Q. And have you seen these before?

A. Yes, I have.

Q. Select Exhibit 7, is this the report and testimony that you prepared to present today at this hearing?

A. That is correct.

Q. And I understand that Exhibit Select-8 is some information that you relied upon in preparing your report that wasn't easily available to the world, so you -- we wanted to provide that as an exhibit for the hearing; is that correct?

A. That is correct.

Q. And I think for perhaps part of your testimony you are going to put some information on the screen from your -- from your testimony; is that correct?

A. That is correct.

Q. Great. If you could, Doctor, provide us -- go

through the introduction materials on your background, and then pause, and I can ask you a couple questions, and then we'll go from there. Okay?

A. Sure.

THE COURT: Let's mark the exhibits.

Select-7, top right-hand corner, will be marked as Exhibit 224.

(Thereafter, Exhibit Number 224 was marked for identification.)

THE COURT: Exhibit Select-8 will be marked 225 for identification.

(Thereafter, Exhibit Number 225 was marked for identification.)

THE COURT: Thank you. Your witness.

MR. MILTNER: And before you start, just for the record, I'm not good at putting things on the record, but I want to put on the record, I wrote myself a note to get these marked before we started. And I'm really not good at that. But Dr. Farkye --

THE COURT: No problems at all.

THE WITNESS: So I have been retained by Select Milk Producers to provide a written report expressing my independent opinion on milkfat recovery or milkfat retention during cheese making. I have a Bachelor of science degree in biochemistry and nutrition from the University of Ghana. Came out to do my Master's and Ph.D. at Utah State University in nutrition and food sciences.

Then I worked as a post doctoral scientist at the

University College, Cork, before joining California Polytechnic State University where I worked as an assistant professor, associate professor, full professor, over a 25-year period, rising through the ranks. I taught dairy chemistry, dairy processing, cheese and fermented dairy foods, at both undergraduate and graduate levels.

My research primarily focused on emphasis on cheese technology and cheese ripening. I have also worked an enzymes in cheese and enzymes in milk -- milk.

I served as a judge at the world and U.S. championship cheese contest and the ACS cheese contest.

I'm an author or co-author of several peer-reviewed articles, industry presentations, book chapters, encyclopedia articles in areas of dairy chemistry, microbiology, and cheese technology.

I took an early retirement in 1995 to serve as a consultant for the dairy industry, which I have done since. My role as a consultant, I advise, troubleshoot, and find solutions to problems and develop new products and streamline processes for the dairy industry.

My CV attached in Appendix 1.

BY MR. MILTNER:

Q. Thank you, Dr. Farkye.

Now, you noted that your CV is attached. It's pages 7 and 8 of your testimony.

I notice at the end that you said there were over a hundred different research publications that you were involved with; is that correct?

A. That is correct.
Q. And you provided a smaller subset of those that more directly relate to butterfat retention or butterfat recovery; is that right?
A. That is correct.
MR. MILTNER: Your Honor, we would ask that Dr. Farkye be recognized as an expert in the areas of cheese processing, cheese manufacturing, and food science.
THE COURT: Seeing no objections, I so find that this witness is qualified to testify as an expert on those topics.
BY MR. MILTNER:
Q. So, Dr. Farkye, I think perhaps the best way to proceed with your testimony is to have you present it as you would to folks you wanted to educate, and if that involves putting some information up on the screen so folks can follow along, that would be great. And then we can ask some additional questions either throughout or at the conclusion.
Does that sound all right with you?
A. Sure.
Q. Excellent. I'll let you take the keys from here.
A. So if it's okay with you, I would just project my talk on the screen, and then I would just point along as we read it, or at least talk about it.
So the first thing is to understand cheese making. Cheese making involves a number of steps, which I've outlined here. First you are going to bring the milk into

your plant, and you are going to standardize the milk to a protein of casein-to-fat ratio.

Then you are going to pasteurize the milk. Of course, some people choose to use raw milk, but we're going to focus on pasteurized milk here.

Then you transfer the milk into a cheese vat, and then you add your ingredients which are color for -- if you are making yellow cheddar, you are going to add color. Then you are going to add your starter culture, which is harmless lactic acid bacteria that you are adding to the milk. Then you are going to add calcium chloride -- or may or may not add it depending on the type of milk you are using. Then you are going to add the coagulants that we call rennet or chymosin.

Then you are going to allow the milk to settle for about 30 minutes, and that's when we call coagulation or curd formation. And then after the curd is firm enough, you are going to cut the curd into cubes.

Okay. And then after cutting that curd into cubes, you are going to allow the curd to heal for about five minutes. Then you are going to begin to stir and cook the curd in the whey. So now you have curd and whey, and you are going to cook.

Then after you cook to the desired temperature, here we are talking about cheddar cheese, so many times we are going to cook to about 100 to 102 degrees Farenheit. And then when -- this allows the cultures to grow and give you the right acidity that you desire.

Then after that, you are going to drain the whey. So at this point that we are going to think of fat recovery or fat retention. So when you cut the curd and you drain the whey, some of the milk components are retained in the curd and others are lost in the whey. And so how you treat the curd during cheese making can affect how much retention of butterfat or casein that you have.

Then after that, after you drain the whey, you are going to matt and cheddar the curd, and you are going to mill the curd or cut it into small finger size chips. And then you are going to salt it, hoop or mold it, and package it.

And it can be done either manually or using towers. Current cheese plants, large cheese plants will use block formers or cheese towers.

Okay. So that's the basic steps of cheese making.

Now, to make that cheese efficiently, you want to recover as many -- or as much of the milk components as possible. Because really the whole intent is to preserve milk, and you don't want to lose the components -- every pound of milk solids that you retain in the cheese, the more profitable you are. Because if it's lost in the whey, and you don't have at market for the whey, that's it. Okay. Even though there are ways to recover that.

Okay. So the amount of fats that is lost in the whey is very small, but it's -- it can all be very significant. So when fat is lost in the whey, it's called whey fat or you get whey cream. Now, some companies may

choose to add the whey cream back, but it is not a standard practice in industry, because when you add whey cream, you ought to think about bacteriophage and contamination. So you -- you have to treat as well. So it is not a standard practice, but that's not to say that it's not done.

Okay. Now, to make cheese we are going to start with milk. So what I have here is a table of milk components. And we have different breeds of cattle in the U.S. or worldwide. The left column shows the components of fat, protein, lactose, ash, total solids, water, protein-to-fat ratio.

Then the second column shows the composition of Holstein milk. Holstein is the largest breed of cattle we have in the United States.

Then in the fourth column -- the fifth column is Jersey cattle. That's the second largest breed. So if you can -- we can focus on those two there. Holstein milk has about 3.5% fat; Jersey milk has about 5.05% fat.

Protein in Jersey -- Holstein milk is 3.2% on the average; protein in Jersey milk is about 3.79 or 3.8%.

So if you look at those, the protein-to-fat ratios, Holstein milk has a protein-to-fat ratio on average about 0.91 and Jersey milk is about 0.75.

Now, USDA calculates the average protein-to-fat ratio in standard milk, which contains 2.99% protein or 3.5% fat, with a ratio of .85. So it is closer to Holstein milk than Jersey milk. But if you blend the two,

you are going to get something very, very close.

Actually, in my Master's thesis which was done in 1984, on the effect of casein-to-fat ratio on fat retention in cheese making, I came up with a chart here, which holds true up till today.

So hopefully I can -- so if we look at the chart that shows clusters of three triangles. Essentially what we did was we took Holstein milk, which is the cluster of three triangles in the bottom right corner. The protein-to-fat ratio or the casein-to-fat ratio was average of .71.

Then we took the cluster in the top left corner is All-Jersey milk. So those had -- because of the high fat and high protein, the casein-to-fat ratio is about .64 average.

And the cluster in the middle is a blend of both milks. So we blended Jersey milk and Holstein milk to get what is typical in the industry. And that's the cluster in the middle.

And we made cheddar cheese to see if we are going to get differences in fat recovery.

Now, what we found is there's no difference in fat recovery, so the higher protein-to-fat ratio, the more fat you get in the cheese, but as a percentage of recovery, it was about the same.

And why do we standardize milk for fat recovery? We do standardize milk to be able to meet the standards of identity for cheese. For instance, cheddar cheese must

have a minimum of 50% fat in it, dry matter, and no more than 39% moisture. So if you do not standardize the milk to the right casein-to-fat ratio, you are going to lose the milk components, and you are not going to recover. And then you are also not going to meet the standards of identity. And that's the primary reason why we standardize milk for cheese making.

Okay. Now, every cheese maker is making cheese to maximize cheese yields.

How do we calculate cheese yields? Well, there is an old formula called the Van Slyke and Price cheese yield formula. This formula was developed in 1894 from work that was done in New York. And this holds true up till today.

So this formula says that for cheese yield, cheddar cheese yield, you are going to retain about 93% of the fat. You are going to lose a tenth of a pound of casein, which is when you clot milk for cheese making, casein is hydrolyzed at a specific bond, and some of that casein is lost in the whey, and most of it is retained as part of the curd. So the formula accounts for the loss of casein in the whey.

Now, the formula also says that when you add salt to cheese during cheese making, you retain some of the salt and other solids in the milk, which is nonfat and protein, like the lactose, the minerals. And that is about 9% of the sum of the casein and the fat, so that's where the 1.09 comes in. And then you divide by the

solids in the milk, so one minus the moisture composition. Say you had a cheese of 39% moisture, it would be one minus .39. If you have 37% moisture, it would be one minus .37. Okay.

So this has what worked so well, but what happened is Van Slyke and Price, their cheese making was done in open vats. And I will show you pictures of that in a minute.

And in the '80s cheese plants started going to -- to automate, and they were going for what we call enclosed cheese vats for -- to improve safety, to improve yields, also. Then the first set of enclosed cheese vats that were introduced were called the Double O vats. Okay? And I will show a picture of that in a minute.

And when these vats were introduced, we couldn't attain the 93% fat recovery. So there was petition to reduce the Van Slyke yield formula and reduce the fat recovery to 90%. And that's how the whole thing started.

So we had the modified Van Slyke formula where it was .90 times F plus C minus .1, or some people -- instead of C minus .1, they'll do .78 times P because casein, which is C, was not easily measurable. So they'll measure protein, and since 78 to 80% of the protein in milk is casein, they'll use .78P instead of C.

Okay. So if I may, I can just pause here and show pictures of vats.

So -- so once Van Slyke did his work, or Van Slyke and Price did their work, we have open vats, which is

shown here.

Then we went to the enclosed cheese vats. So on the middle left there we have -- it looks like two Os if you look at that, right? Two Os, it is called Double O vats. That's what we went to, Double O vats.

And in the box there as -- it says that Double O side vat -- from the side view, style vats on the side view.

Then we went to horizontal cheese vats. So instead of having the vertical agitation, we have horizontal agitation.

And then the new cheese vats are -- instead of having a single shaft, we have double shaft. So that's been an improvement in the technology for cheese making equipment, and this affects cheese making -- efficiencies of cheese making.

Okay. So I'll go back, toggle back to...

So Van Slyke and Price did an excellent job to get the 95 -- 93% fat recovery. We couldn't achieve it when we went to the Double O vats. It was more difficult. Yes, you can attain it, but you have to work hard to attain that. Now that we have newer vats, we are able to even go beyond that.

And in my research to write this paper, I sent e-mails out to equipment manufacturers, and I have notes up here from Tetra Pak, this -- they are saying that, using their cheese vats, which is what most of the large cheese plants use today, you can attain as high as 97% fat

recovery. This is using the twin screw cheese vats, so it's horizontal ACV. I have seen that in cheese plants myself, and I know that it's -- it's doable. Okay?

Now, if you are using the old Double O vats, yes, you can achieve it, but it's a little bit more difficult to do.

Okay. Now, cheese making and cheese yield is not only about fat recovery. It's about protein also. Because during milk clotting, you're curdling the milk, and as you curdle the milk, it's forming a network and it's trapping the fat in it. So if you have a weak curd, you are going to -- that curd is going to shatter very easily, and so when you -- when you stir it, you are going to lose more fat. If you have a firm curd, because of the strong protein network, you are able to hold more fat.

So it's not just about equipment, but it's about, say, the ingredients that you are using in cheese making, which the coagulant plays a big role.

So Christian Hansen, that's the leading coagulant manufacturer in the world, actually has introduced enzymes that allow you to increase yield based on protein content. So essentially as you are trapping more protein, you are also trapping more fat.

And this picture here shows how different coagulants can actually result in higher cheese yield. And there's more information in the exhibit that is already included, Exhibit 8.

So as you use more efficient milk coagulants, you

are going to increase your cheese yield by creating a better network, and by so doing you are also trapping more fat. Okay.

So in my experience as a consultant, I'm aware that to -- to optimize cheese yield, we need to standardize milk by blending -- by introducing protein or fat, from either a source where you are using UF milk, RO milk, skim milk, nonfat dry milk, or cream. You need to standardize to the right protein-to-fat ratio or casein-to-fat ratio. And you have to control the coagulants used, the curd firmness, the stirring, that's where the equipment comes in. And for large commodity cheese plants, you can achieve 93% or higher fat recovery, if you do a good job.

Okay. So in conclusion, consistent milk composition, which we know now through breeding programs and good milk -- milk composition, and improvements in equipment, and cheese making ingredients, particularly coagulants, have all contributed to increased cheese making efficiency and higher milk solids recovery, including milk fat in cheese. Okay.

Therefore, in my opinion, fat recoveries of 93% in the original Van Slyke and Price cheese yield equation, 93% is achievable. And direct observations and my direct view of cheddar cheese plants are achieving these fat recoveries, and even above these levels. So I would say that it was done in 1894, it can be done now -- or actually it is being done now.

And on that note I will conclude.

Q. Thank you, Dr. Farkye. I want to ask you some more questions about what you just presented.

So you talked about when Van Slyke and Price developed their formula. And when you and I were talking last night, you told me you have a copy of this book that I found last week.

A. That is correct.

Q. From whatever, 1916, by Mr. Van Slyke -- or I don't know if he was Dr. Van Slyke or not. But Van Slyke, he was a Ph.D.

A. Yes.

Q. He published this book in 1916, and he talked about the formula you have discussed.

Now, you have talked about the impact of vats and how that affects the butterfat recovery, so I want to go through that just a little bit more with you.

A. Okay.

Q. His research, his observations were done with the open vats that you showed, correct?

A. That is correct.

Q. Now, the next kind of evolution in vats, those are the Double O vats you talked about?

A. That is correct.

Q. And do you recall when those types of Double O vats started being manufactured?

A. I will say in the '80s. Early '80s.

Q. And so you described those vats as a vertical vat,

correct?

A. Vertical agitation.

Q. Okay. So when you talk about vertical agitation, that's -- that means that the shaft in the vat is vertically oriented?

A. That's correct.

Q. And that's what stirs the curd, correct?

A. That is correct.

Q. And in an open vat, would that be done more manually, originally?

A. So it will cut manually, but it's also vertical agitation.

Q. Okay. In the Double O vat?

A. In the open vat. So, for instance, if you look at this here --

Q. Okay.

A. -- if I may.

Q. Yeah. Oh, you have to ask him --

A. That's fine. He doesn't have it on. I'm sorry.

Q. That's okay. There we go.

A. So if you look there, there is an agitator right up there in the top right corner. And that's traveling along the cheese. So as it's traveling, it is stirring.

Q. Okay.

A. So that's a traveling agitator, whereas in the enclosed cheese vats, it is stationary, so it is more rotating.

Q. And so am I correct that the primary benefit of

the vertical Double O vat was to automate the cheese making process a little more?

A. That is correct.

Q. But what was found in that automation, the agitation resulted in a lower butterfat retention than with an open vat; is that correct?

A. That is correct.

Q. Now, after vertical vats, after Double O vats came the horizontal vats that you described, correct?

A. That is correct.

Q. How are those different than the Double O vats?

A. So if you can see the horizontal vats, they have the shafts laid horizontally, and they are rotating, and they are -- it is more gentle. That's the first generation. And the second generation you have twin screws, so they are kind of stirring in a counterclockwise manner.

Q. So it's the same agitation function, but the shaft is oriented differently?

A. That's correct.

Q. And you describe it as a gentler action?

A. That is correct.

Q. Now, with the adoption of those horizontal vats, have cheese makers realized higher butterfat retentions?

A. That is correct. Yes.

Q. If I go back to your initial description of the cheese making process, this is the cutting of the curd, the stirring, and the cooking, that's the process that the

vats have automated, correct?

A. Yes.

Q. Now, if we go back to when Dr. Van Slyke was observing cheese manufacturing in the 1890s, all of those processes would have been manual, would they not?

A. The cutting was manual, just like I did in my thesis work.

Q. And I think when you were describing those processes, you -- you indicated that you have to be careful when you cut the curd because you said -- you described it as it has to heal, correct?

A. That is correct.

Q. And that was to keep the protein and fat matrix intact, correct?

A. That is correct. So you don't lose the fat.

Q. So if I can summarize, we went from a mostly manual process where people could be very careful and develop an expertise in how to stir and cut cheese, to a more automated process where we lost some of that human touch and precision maybe?

A. That is true.

Q. To a new iteration of vats, which improve upon, I guess, the efficiencies lost through that initial generation of automation?

A. That is correct.

Q. So now I want to ask you about cheese plants in general. I don't want to talk about really specific plants, but --

A. Okay.
Q. -- were there some significant large commodity plants built after the introduction of the Double O vats?
A. Yes.
Q. Now, those plants, if they were operating at a reasonable level of skill and efficiency, with those Double O vats, what do you think a plant like that could expect in terms of butterfat retention?
A. If they do a very good job, they will get the 93%, but most times they will not. That's why many of the plants and the newer plants went away from the Double O vats.
Q. Now, to get 93%, would that be using what I will call a standard rennet?
A. Yes. You can get a standard rennet, yes.
Q. Okay. If those plants using a Double O vat were to use a more advanced modern rennet, like the one you have described, would they achieve greater than 93% butterfat retention?
A. They will achieve it based on the fabric of better curd formation.
Q. Now, my understanding -- and I was -- like Mr. Munch, I was not doing much during this time period in the industry. In the '90s, let's say, was there a lot of growth in large commodity cheese manufacturing in the United States during that period?
A. Yes.
Q. When would you have started to see the

introduction of the horizontal vats that you have talked about?

A. In the '90s.

Q. So does the introduction of the horizontal vats kind of coincide with the more expansion within the commodity cheese industry?

A. That is correct. That's a fair assumption.

Q. Now, with that first generation, single shaft, horizontal vats, again, a plant of, let's say -- not a top operator but an average cheese manufacturer, using an average rennet, what type of butterfat retention should that plant be achieving?

A. They should strive to get at least 93% fat.

Q. They are striving to achieve that, but let's say that they are -- say that they are -- they are still striving. What might they be realizing on a --

A. Somewhere between 87 and 91, maybe.

Q. Okay.

A. That's what they will be getting.

Q. And their equipment allows them to achieve higher, though?

A. That's correct.

Q. And if they are not achieving that, is that a deficiency in their perhaps training and processes?

A. It could be both.

Q. But it would be something in the control of the manufacturer that they could correct?

A. Yes. If they are careful, they would be able to

control it, yes.

Q. So now take that plant that's striving for 93, and let's say they have got the 93. And now they want to use the best rennets or best coagulants they could find.

What do you think that would do to their butterfat retention?

A. It will improve because of better curd formation.

Q. Now -- and I know you -- you listened to part of the hearing, and you have been here for a bit but -- maybe you have heard the testimony on some of these issues and maybe not. But in the last, say, five years, maybe ten years, has the industry seen quite a number of large commodity cheddar cheese plants constructed and commissioned?

A. Yes.

Q. If you were building a plant in that period, what type of vat would you recommend they install?

A. The -- what we call the ACV double, ACV horizontal cheese vats with the twin screw. And also install the drain mat cheddar system to finish the cheese.

Q. Okay. So if you are installing the double shaft horizontal vat system, that's the one that you described as being, I think, more gentle with its action?

A. That's correct.

Q. And not top-of-the-line achievement, but reasonable operation of a vat like that, what would you be advising that they could expect to get in terms of butterfat retention from those vats?

A. 93-plus.
Q. And if they were -- if they were firing on all cylinders, so to speak, and everything was going right, what might they expect to achieve?
A. As the Tetra Pak engineer said, they can go as high as 96, 97.
Q. And would that go even higher if they were using the best coagulants available?
A. Yeah. After you get to 97, it's -- I mean, some -- it's like having a cut, you are going to lose some blood anyway, right? So there's -- you are trying to trap the fat, but you are -- since you are cutting that fat, you are going to lose some of that fat.
Q. I know your goal here, your role today is not to tell USDA what proposal they should or shouldn't adopt.
A. No.
Q. But do you have an opinion about whether the majority of cheddar cheese produced in the U.S. today, commodity cheddar cheese produced in the U.S. today, comes from plants that can achieve a butterfat retention of 93%?
A. Yes. Very much so. If you look at the amount of milk that is produced in the United States and the number of cheese plants that make cheddar, there are probably the top maybe ten would use -- would have modern cheese making equipment and achieve higher.
Q. Achieve higher?
A. Yes.
Q. And is your conclusion based both on the

theoretical science as well as your observations of the industry?

A. Yes.

Q. Thank you, Dr. Farkye.

MR. MILTNER: We would make the witness available for additional examination.

THE COURT: Any questions for this witness aside from AMS?

CROSS-EXAMINATION

BY MR. ENGLISH:

Q. Checking to see it is still morning. Good morning, Dr. Farkye. My name is Chip English. I represent the Milk Innovation Group. I think you got here sometime yesterday, although I think you may have taken a red eye, so I don't know how much you were able to follow yesterday. But I do appreciate very much, I think everyone appreciates your appearance.

A. Thank you.

Q. And the fact that you are not taking a position, but you have articulated the science.

I actually want to start maybe at the end of what you just said in response to additional questions from Mr. Miltner.

And as I understood it, the -- he got you to say it was the top ten cheese companies or cheese plants could achieve this 93% butterfat, correct?

A. If they do a good job, yes.

Q. If they do a good job?

A. Uh-huh.
Q. So even within the top ten, if they didn't do a good job, they might not hit 93%, correct?
A. I would say with modern equipment, most of them would right now.
Q. Okay. So that modern equipment comes with a cost, though, correct? I mean, Tetra Pak is in the business of making money, correct?
A. That is correct.
Q. So you have talked about sort of the majority of cheddar cheese. Would that mean volume as opposed to plants? When you talk about the majority of cheddar cheese could be produced at 93%, would that be a volume of cheese as opposed to a majority of plants?
A. So it's both. Because if you look at California, for instance, ninety- -- about -- the last data I saw from CDFA, about five plants use about 95% of the milk that is produced in cheese making. And I mean, it may not be cheddar alone. It may be cheddar, mozzarella. And if you look at the U.S. as a whole, I believe there are about 150 cheddar cheese plants, maybe 50 in Wisconsin and 25 in Idaho and -- I mean, making large commodity cheddars.
So your -- to answer your question, it's both volume and number.
Q. But there are a significant number of smaller plants in other parts of the country, such as Wisconsin, correct?
A. Yes. But the amount of milk they utilize may be

proportionally -- proportionately lower.

Q. Nonetheless, those plants do provide an outlet for producers' milk, correct? If those plants didn't exist --

A. Yeah, they do.

Q. Okay. And the e-mail that you received from Mr. Steffens from Tetra Pak, is that an e-mail you got?

A. Yes, that's an e-mail I got.

Q. Is the text you provided, the entire text of his e-mail?

A. Yes.

Q. Okay. So nowhere in that text does he say, for instance, how much the Tetra Pak YieldMaster costs, does he?

A. No.

Q. Nowhere in his e-mail does he say how much the Tetra Pak HCV costs, correct?

A. No.

Q. And nowhere does he say how much the current Tetra Pak Double O costs, correct?

A. No, sir.

Q. And when you talked about the results, I am wondering, because the e-mail, the last part of it, which carries over to page 5, says, we can increase the Van Slyke rFat factor in a relational way; moving from rF equals 0.90 hyphen 0.91 up to 0.91 to 0.925.

Is that what he says?

A. Yeah. So what he is saying, fat retention or fat recovery, that's what he's saying.

Q. Right. But nowhere there does he say 93%, does he?

A. No, he doesn't say that.

Q. Okay. And then the next sentence says, "Much of our data has been based on a very large plant where three different style vats are located," correct?

A. That's what he says, yes.

Q. So his e-mail is basically limited to one very large plant, correct?

A. I would -- I don't know what he was referring to because I didn't ask him.

Q. And he's not here to tell us, is he?

A. No. But I do know from my experience that most of the large plants would use the Schpering vats or Tetra Scherping vats.

(Court Reporter clarification.)

BY MR. ENGLISH:

Q. And similar to the e-mail that you obtained from Mr. Steffens, the Chr. Hansen document, which you called a study, is it maybe more correct to say it's a marketing piece by Chr. Hansen?

A. Well, I didn't -- it's -- so some of -- Chris Hansen is a very reputable company, and they would -- they would do the work before they print out something like this. And we -- and I do know from experience that using some of these cheese rennets would give you high yield because I have done it.

Q. Does the Chr. Hansen document discuss what the

costs are for this marketing piece of 20 pages?

A. No.

Q. I may have misheard, but did you hear some testimony from -- did you follow last week and follow some of the testimony last week or just when you got here?

A. No, I did not follow.

Q. Okay. If there was a witness who said that, yeah, that's what the salespeople would say, but, you know, they don't necessarily believe it about the coagulants, would you disagree with that witness?

A. I don't know what the witness said, so I cannot.

Q. If a witness appeared last week and testified that they were still using Double O, you would have no reason to disbelieve them, correct?

A. There are some plants using the Double Os. It's been sold. Again, it's more volume, throughput, efficiency. And there are some that have gotten away from Double O -- the newer Double Os to go to the ACVs because if you do the math of the fat recovery, it will pay for itself.

Q. But you don't have that math here because you don't have the costs, do you?

A. No, I don't have the math, but I have spoken to cheese plants overseas who have actually expressed that sentiment.

Q. But it could very well be that a plant, say, in Wisconsin hasn't been able to make that conversion because -- for reasons that go beyond your testimony, the

Federal Order pricing system may limit their investment ability?

A. I have no knowledge of that.

Q. Now, you were here, yesterday, though, when I had my conversation with Mr. Allen in the afternoon, correct?

A. I may have listened about it, yes.

Q. Okay. If he agreed with me that inevitably there is some fat loss, through, say, wastewater, you would have no reason to disbelieve that, correct?

A. So there is some fat loss in wastewater, but it's very, very, very minimal, because you are going to wash the vat or the line anyway, and all that is going to go to waste. But the amount is very, very low. Most of the fat loss occurs during whey drainage.

Q. But there is some fat loss?

A. Very low.

Q. But it is above zero, correct?

A. I don't have a number, but it's very, very, very, very low.

Q. I understand.

But would you agree with me it is above zero?

A. It depends on how many decimal places and how significant it is.

Q. Okay. Nonetheless, your own statement says, on page 2, "Most of the fat losses during cheese making occur during whey drainage"?

A. That's what I just said, yes.

Q. Okay. Now, the word "most" doesn't mean "all."

So are there other fat losses other than through whey drainage?

A. Yes, manipulation of the curd can occur anywhere where you are -- you are losing components.

Q. Okay. And going back to the Double O vats, you would agree that butterfat recovery from Double O vats would not be at 93%, correct?

A. It is achievable if you do a good job, yes.

Q. But achievable is not the same thing as achieved, is it?

A. It's become semantics, sir.

Q. Okay. So I realize you are not here to talk about Federal Order policy. But are you familiar with the current Class III milk formula in Federal Orders and how it accounts for fat?

A. No.

Q. Okay. If -- if I were to represent to you that my understanding of the two proposals from Select, which are Proposals 10 and 11, if both were adopted, that the cheese yield formula would use 93% milk fat going to cheese and 7% of fat recovered as sweet cream for use in Grade AA butter, so essentially it's 100% fat recovery, does that make sense to you?

A. Please come again?

Q. Okay. If combination of the proposals submitted by Select were to achieve in one part of the formula 93% of the milk fat going to cheese and 7% of fat being recovered as sweet cream for use in Grade AA butter, that

adds up to 100%, correct?
A. Yes.
Q. Okay. Does that make sense to you that it would be 100%?
A. I don't know the values for the mass balance, but 93 plus 7 is 100.
Q. But you have already mentioned that there are some losses, although you can't define them, correct?
A. Again, it depends on how many decimal places you are going to.
Q. Do you know -- and if this gets beyond what you are talking about that, that's fine -- but do you know how whey cream is marketed?
A. I know about whey cream, but I'm not into marketing, so I can't comment on how it's marketed.
Q. So would you know whether it could typically be use in Grade AA butter products?
A. Can whey cream be used in butter? There are people who use whey cream in butter making.
Q. But can it be used --
A. It is called whey cream butter.
Q. Yes. It's called whey cream butter.
Can it be used in Grade AA butter products --
A. I don't know the regulations there, so I cannot answer that.
MR. ENGLISH: That's all the questions I have. Thank you.
THE COURT: Anyone else have questions other than

AMS?

AMS.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good morning.

A. Good morning.

Q. Thank you for coming and testifying today. Just a couple questions.

I want to turn to your statement on page 2. And you have a Table 1 listing the average composition of milk by different breeds of dairy cattle. I just wanted to know the source of that.

A. That's any dairy chemistry book would have that. So a good one would be Pat Fox's books.

Q. And these are -- so these are average compositions, recent?

A. Yes.

Q. And so on your figure on the next page, what I think the take-away here is you looked at All-Jersey milk, and you looked at all Holstein milk?

A. That's correct.

Q. And while the fat levels in the cheeses differed, as a percentage basis, the recovery was the same?

A. That's correct.

Q. And then the middle cluster is where you blended the two, and that is -- and is it right that that is what is more realistic of what is currently done in order to standardize to meet the standard of identity?

A. No. So if a plant does not have milk coming from two sources, that's not -- this was a study that was done because at that time the sponsor was -- had both Jersey and Holstein and wanted to find the optimum.

Q. Okay. And when was that study done?

A. 1983, '84.

Q. Okay. So on page 4 when we're talking about -- you're talking about cheese equipment, and I know you have been asked a few questions on this. But you talk about how 93% is achievable using Tetra Pak equipment.

My first question would be, what other types of equipment are out there or how many cheese manufacturers do or do not use this type of equipment?

A. So there are probably about -- for cheddar cheese making, there are probably maybe two or three major players there in equipment making, and they all have, different versions. Because some of these equipments are patented. Just because of the design, they may have slight variations, but they do similar work.

Q. And you mean slight variations in the butterfat recovery?

A. No, in the design.

Q. In the design.

So do you know anything about the butterfat recovery in those?

A. Fairly similar.

Q. Okay.

A. And I can bet you that most, if not all, the large

commodity cheese plants are going for the more efficient equipment.

Q. The newer -- the newer plants being built?

A. Yeah.

Q. Can you speak to the -- about the plants that are maybe still using Double O vats, the number of plants or the age of the plants or --

A. Very little. I mean, as a side note, I wasn't using -- and it's maybe in the -- I would say in the early '90s this plant had Double O vats that they had taken out, was a year old. And I asked, why did you take it out? The answer was, just do the math with butterfat recovery. It will pay for itself. And when I did the math, within a year, it will pay for itself.

Q. On page 5 when you talk about coagulants and the use of better coagulants can create stronger protein bonds and then trapping more fat. So can you talk about the prevalence of industry cheese makers in using these better coagulants?

A. Most cheese plants, I mean, use the better coagulants. In the United States.

Q. Okay. And so when you talk about "most cheese plants" use that or you use Tetra Pak equipment, can you speak a little bit about how you have that knowledge?

A. As a consultant in the industry, as a reviewer of articles, either as an expert reviewer or as an author, and of course just knowing the industry.

Q. Is some of that going into plants to observe and

studying their data to see that's what they achieve?

A. Going to plants as a consultant.

Q. Right.

A. Uh-huh.

Q. On the last page, the last sentence ends, "The majority of commodity cheddar cheese manufacturers," and I think you clarified in response to Mr. English that that's, in your opinion, both in volume in cheese and number of plants. Then you say, "are achieving fat recoveries at or above these levels."

Are these levels 90% or 93%?

A. 93%.

Q. Okay. So is it of your opinion that the current modified Van Slyke formula, which assumes a 90% fat recovery, is not valid anymore based on current technology and ingredients available to use in cheese making?

A. I think the 93% is a more appropriate number.

Q. And there's been -- when we look at cheddar cheese and we survey that for both -- for our formulas, we look at both barrels and blocks.

So is there any difference in the process in the fat recovery in producing those two products?

A. No. Up to the point of packaging, the processes are the same.

Q. And generally manufacturers who make either of those, they use all the same equipment?

A. They use the same equipment up to the time of packaging. Then they -- it's diverted into the barrel or

block format.

MS. TAYLOR: I think that's it from AMS. Thank you.

THE WITNESS: Thank you.

REDIRECT-EXAMINATION

BY MR. MILTNER:

Q. Dr. Farkye, just a follow-up question or two on the questions you received from USDA.

Where you are not a consultant visiting a plant but instead are reviewing someone else's papers or research, would the author of that paper have visited the plant and seen the data firsthand before you stepped in as a reviewer?

A. So I have done both. I have been a consultant in the plant where I have been involved in cheese making, observed their data, and made my comments. So it's been both.

Q. It's been both.

So your conclusions about what plants are achieving, and not just what is theoretically achievable, is that conclusion drawn on your own personal observations or your review of the direct observations of others in the industry?

A. It's both.

Q. It is both.

And then Mr. English asked you about the e-mail from Mr. Steffens and the information from Chris Hansen.

Those were not the sole sources for your

conclusions today, were they?

A. Oh, no.

Q. There are -- there are -- I guess are they a confirmatory data point in your analysis?

A. They are one of several.

Q. Okay.

MR. MILTNER: I don't have any other questions then.

And, your Honor, we would ask the admission of Exhibit 224 and 225.

THE COURT: Seeing no objections, Exhibits 224 and 225 are admitted into the record.

(Thereafter, Exhibit Numbers 224 and 225 were received into evidence.)

MR. MILTNER: Thank you.

Thank you, Dr. Farkye.

THE WITNESS: Thank you.

THE COURT: Is now a good time for lunch? Let's come back at 1:05.

(Whereupon, a luncheon break was taken.)

TUESDAY, SEPTEMBER 19, 2023 - - AFTERNOON SESSION

THE COURT: Let's go on the record.

We're on the record. Off the record we discussed four-originally marked as Edge exhibits that we discussed on September 15th, and we were going to wait until we had hard copies to move them. We marked them, but we wanted to have hard copies to move them into the record. And AMS I think has provided hard copies now, so we'll consider these to go into the record.

I don't know that we need to take them one by one. I'll take them as a group. We have Exhibit 205, which was Edge-9; Exhibit 210, which was Edge-7; Exhibit 211, which was Edge-10; and Exhibit 213, which was Edge-8.

Any objections?

Seeing none, those four stated exhibits are made a part of the record.

(Thereafter, Exhibit Numbers 205, 210, 211, and 213 were received into evidence.)

THE COURT: Mr. Miltner.

MR. MILTNER: Thank you, your Honor. We would call Chris Allen to the stand.

THE COURT: Welcome. I guess we'll swear you in.

CHRIS ALLEN,

Being first duly sworn, was examined and testified as follows:

THE COURT: Your witness.

DIRECT EXAMINATION

BY MR. MILTNER:

Q. Mr. Allen, do you have in front of you a document marked in the upper right as revised Exhibit Select-9?

A. Yes.

MR. MILTNER: Your Honor, could we mark that as a Hearing Exhibit for identification?

THE COURT: Yes, we can. Select-9 is marked for identification as Exhibit 226.

(Thereafter, Exhibit Number 226 was marked for identification.)

MR. MILTNER: Thank you.

BY MR. MILTNER:

Q. Mr. Allen, you have seen this document before, correct?

A. Yes.

Q. And it is a written statement which summarizes the -- primarily summarizes the regulatory text changes for the adoption of Select's proposals, correct?

A. Yes.

Q. Now, this is a revised exhibit, it differs from the one submitted in advance of your testimony, correct?

A. Yes.

Q. And we distributed that to counsel this morning, as well as AMS.

What are the two principal -- really the two only changes to the exhibit?

A. Well, first we found that in our initial calculations of the outcomes of the changes to the formula, that we had incorrectly entered the monthly

commodity price data. We had entered the prices as two decimals, rounded to the first two decimals. If we had been more thoughtful, we would have noticed that those should have been entered as rounded to four decimals for each month. So those five-year and ten-year periods. We went back and corrected the average calculation to rounded to four decimals, and I sorted those commodity prices, those revised commodity prices into formulas, in the original formulas, the revised formulas for each proposal, and established a new outcome of those prices.

Q. And that revised data is reflected in the two, I guess, tables on page 1 and page 2 of Hearing Exhibit 226, correct?

A. That is correct.

Q. And the calculations of the effects of the proposals, there were modest changes in the terms of a few pennies --

A. Correct.

Q. -- that's correct?

Okay. How about the second change to -- to this exhibit?

A. Again, just reviewing our process, we recognized that we had failed to indicate regulatory text change related to the advanced price. A portion of the regulatory text addresses the butterfat price without using references to the other portions that we had already suggested edits for, so we added in Section 7 of CFR 1000.50 paragraph (q)(3), we made an adjustment there,

a revision there to the regulatory text.

Q. And the change to the multiplication factor there, it's the same -- same number as we have proposed a change in 7 CFR 1000.50(l); is that correct?

A. Yes.

Q. And just so the record's clear, the changes that Select has proposed in Proposals 10, 11, and 12, they change yield factors for the various milk components, correct?

A. Yes.

Q. And those components primarily affect the formulas for Class III and IV milk, correct?

A. Correct.

Q. But butterfat, there's an advanced butterfat factor that goes into the advanced pricing, correct?

A. Yes.

Q. And the other advanced factors, their changes refer to CFR sections without restating the particular mathematics, correct?

A. Yes.

Q. So there's no change in what Select intends to accomplish with any of its proposals, correct?

A. Correct.

Q. Okay. Is there anything in this statement that you feel the need to read into the record?

A. I do not. I mean, we have covered the key points of the statement.

Q. Are there anything else that you would like to

address with respect to this exhibit?

A. No, I don't -- I don't believe so.

MR. MILTNER: Okay. We would make Mr. Allen available for additional questioning, your Honor.

THE COURT: Questions for this witness? Other than AMS?

Looks like you are up AMS if you are ready -- or even if you aren't.

MS. TAYLOR: Lucky for us, we are.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. I don't think we -- I have -- we have one question, as you gave us a lot of food for thought to go back last night and think about on the buttermilk piece.

So since you are back up here, I want to get your thoughts on from a policy perspective, why does Select feel it's important to account for buttermilk powder in the yield formula as opposed to other, including other possible products? Like why are we focusing just on buttermilk powder I guess is the question?

A. I believe it's just because that's how the initial price formula was established, with that focus on buttermilk powder, and we just believe that those underlying assumptions were not established properly.

Q. Okay.

MS. TAYLOR: Okay. Okay. That's it.

THE WITNESS: Thank you.

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REDIRECT EXAMINATION

BY MR. MILTNER:

Q. Since AMS asked the question, let me add a little bit -- or ask you a few more about that.

When -- when a producer sells milk to a Class III manufacturing plant, to your knowledge, all of the components that are delivered are priced in one product or another, aren't they?

A. Yes.

Q. And if you deliver milk to a Class IV plant that produces butter and nonfat dry milk, are all of the components delivered to that plant priced?

A. Yes.

Q. Even the components that end up in buttermilk powder?

A. Yes.

Q. Correct? Like now they are?

A. Can you please restate your question?

Q. Sure. Sure.

Under the current price formulas, milk delivered that a Class IV plant --

A. Yes.

Q. -- solids that end up in buttermilk powder --

A. Right.

Q. -- do producers get paid for it?

A. Assume that the value is negligible.

Q. Okay. But those plants are indeed selling buttermilk powder in many cases, correct?

A. They are.
Q. Okay. Sorry my questions weren't as clear as they probably should have been.
A. I understood your question to be how the producer was paid on the components of the milk received by the plant. That's why I wanted you to restate it. So I'm sorry about that.
Q. No, I'm glad you -- I'm glad you asked me to clarify.
MR. MILTNER: I don't have any other questions, and so we would move admission of Exhibit 226.
THE COURT: Okay. Seeing no objections, Exhibit 226 is admitted into the record.
(Thereafter, Exhibit Number 226 was received into evidence.)
MR. MILTNER: Thank you.
THE COURT: Thank you, Mr. Allen.
MR. NIELSEN: Good afternoon. Eric Nielsen, counsel for Leprino Foods Company.
THE COURT: Okay. I need to swear in the witness. Please raise your right hand.

ALISON KREBS,

Being first duly sworn, was examined and testified as follows:
THE COURT: Your witness.
MR. NIELSEN: Thank you, your Honor.
I have just circulated a document marked IDFA Exhibit 43. I'd like to have that document marked

Exhibit 227 for identification purposes.

THE COURT: Yes. That exhibit is so marked.

(Thereafter, Exhibit Number 227 was marked for identification.)

MR. NIELSEN: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. NIELSEN:

Q. Please state your name for the record.

A. Alison Krebs.

Q. Ms. Krebs, you have previously testified in this hearing, on September 5th and September 14th, correct?

A. Yes.

Q. And has anything changed materially in your professional or educational background that you provided in previous testimony?

A. No.

Q. Okay. Ms. Krebs, the document in front of you marked Exhibit 227 for identification purposes, is that a true and accurate representation of the testimony you intend to present today?

A. Yes.

Q. Great. Please proceed with your testimony.

A. Thank you.

I'm Alison Krebs, director of dairy and trade policy, for Leprino Foods Company (Leprino), headquartered in Denver, Colorado, as I have previously provided my full introduction in prior testimony during this hearing. That information has already been entered into the record, so I

will not repeat it here. In this tranche of testimony I will address Proposals 10 through 12.

Opposition to Proposals 10, 11, and 12, yield factor adjustments.

Leprino Foods opposes the three proposals from Select Milk: Proposal 10, to update butterfat recovery to 93%; Proposal 11, to update specified yield factors to reflect actual farm-to-plant shrink; and Proposal 12, to update the nonfat solids factor from 0.99 to 1.03.

Leprino's opposition to these proposals rests primarily on the fact that a more comprehensive review of the yield assumptions and the losses throughout the balance of the manufacturing process must be completed in conjunction with any changes.

The Van Slyke yield formulas (which form the basis of the current cheddar yield factors) and the Select Milk proposal are premised on components in a vat. That yield formula does not address the other losses that occur throughout the production process.

While we do not dispute that some cheddar plants achieve the 93% fat retention that is proposed, this was also the case at the time the current factors were established. The question is whether the vats that facilitate this higher fat capture have been fully implemented and whether the proposed capture rate is achieved across the broader industry. The broad industry data needed to make such updates is not currently available.

Even more importantly, Select Milk does not address the fact that the current formula assumes that all fat not captured in finished cheddar is processed into Grade AA butter. This assumption neither recognizes in-plant milk component losses nor that butter manufactured from whey cream is not legal under standards for Grade AA butter.

In summary, these proposals essentially "cherry-pick" yield factors within the formula. If some of the yield factors are to be evaluated, then all yield factors should be considered.

Finally, if this hand-picked group of factors is updated without broad, publicly available data, it would directly conflict with the logic USDA provided in the following quote from the 2013 Final Decision regarding the valuation of whey cream (p. 9274), quote: "While there is record evidence from some manufacturers as to their individual saleable volumes and values of whey cream, that limited data does not provide for a reasonably complete assessment of the national market for whey cream and its various competing uses. Accordingly, Proposals 9 and 10 are not proposed to be adopted."

If, after a thorough vetting of all yield assumptions in the Class III formula in a future rulemaking proceeding record evidence supports the proposed increases in fat retention to 93%, Leprino Foods would not oppose that the butterfat recovery factor be moved to 93%. However, that change must be accompanied by

a broader vetting of data and recognition of in-plant losses, along with proper valuation of whey cream rather than following Select Milk's proposals that cherry-picks factors to update.

If Congress grants USDA the authority to conduct regular, mandatory cost of processing studies, yield data (including butterfat recovery) could become part of this process as well. When that study data is available, the industry would then have broad, publicly available data from which to update these factors.

There is an important caveat for cheese if mandatory studies are used to standardize yield factors. Vat component data needs to be detailed in order to accurately identify yield drivers, including from fortification ingredients, rather than assuming that the vat components mirror those of the incoming raw milk. Fortification is the process of including other, more concentrated milk products such as nonfat dry milk, condensed skim, or ultra-filtered milk in the cheese vat along with milk. Fortifying the cheese make process with these products enables cheese makers to improve productivity and plant utilization, manage raw ingredient inventories, and manage input economics based on market price relationships.

If sufficiently detailed vat component and yield information is captured as part of a mandatory industry survey for the purpose of updating these factors in milk pricing formulas, Leprino Foods would be open to

considering use of such mandatory study data to update relevant formula factors going forward. At a minimum, such data, if accurately collected, could validate both the yields and the losses that are inherent to manufacturing cheese and its related proposals.

Specific to Proposal 11, the proposal to eliminate the allowance for farm-to-plant shrink, many of the same principles noted immediately prior also apply here. The key difference being that instead of yields, we're considering the difference between the components and volume that are measured at the farm bulk tank versus what is delivered to the manufacturer.

The starting point of the Van Slyke yield formula is the dairy components in a cheese vat at the start of cheese making. However, milk priced under Federal Milk Marketing Orders is sampled for components and measured for volume at the farm. Elimination of the allowance for the farm-to-plant shrink denies the reality that not all volume or components measured at the farm make it into cheese vats. Losses occur prior to delivery to the manufacturer's milk silos, in addition to within the production process.

We applaud that Select Milk Producers has limited their own farm-to-plant volume losses. A simple calculation of average farm size using the data on their website suggests that their members deliver on average 231,898 pounds and assemblers are shipping multiple full truckloads from single locations daily. This contributes

to significantly lower losses than the industry norm.

Additionally, many Select Milk members scale their milk, weighing the trucks before and after loading, and eliminating the measurement of milk that is lost in the transfer process between the milk bulk tank (or silo) and the truck.

While Select Milk's performance in this regard is laudable and aspirational, it is not reflective of the broader dairy industry. The average farm size in most milk sheds is significantly smaller than that of the Select Milk's dairies. The 2017 Census of Agriculture noted that just 8.8% of farms produced at least 39,500 pounds of milk per day. Trucks hauling milk from multiple farms per load continue to suffer the same losses that existed at the time the farm-to-plant loss assumptions in the formula were first established.

Milk volume and fat loss may differ significantly between the largest farms and smaller operations. For much of the equipment that is used even today, a hose full of milk is still lost on every farm between the farm's bulk tank and the truck. For cheese makers buying milk from smaller farms where a load includes multiple stops, this volume loss remains significant.

Some milk sheds are solely comprised of small farms, and those losses are consistent. Others have more diversity in size. If the current volume allowance is removed, this would incentivize cheese makers to buy from larger farms or penalize farms that fail to provide a full

load of milk. Creating this motivation would be detrimental to the smaller farms across our rural communities.

The characteristic of fat clinging to the inside of stainless is no different today for most farms than when the farm-to-plant loss was first acknowledged in the formula. Many milk sheds are still dominated by smaller farms where the fat that remains on the inside walls of the farm bulk tank is meaningful relative to the volume of milk. Flushing farm bulk tanks with water is considered adulteration and is therefore illegal, so the fat clinging to the inside of the bulk tank remains at the farm.

Similar to the volume loss differences across farm sizes, Select Milk can be considered an anomaly with regard to fat losses. Many of these large dairies sample each tanker for components directly from the tanker immediately after loading since the tanker is either being direct-filled or may represent a portion of the volume of a milk silo.

Consequently, one would expect lower differences in fat tests than typically occur when components are sampled in the bulk tank and fat is left clinging to the interior surface of the tank, as is the case across most farms in the US.

There is no evidence that volume and fat losses do not occur between the farms and plants. While milk sheds dominated by large dairies shipping full truckloads of milk tend to have less significant losses than their

smaller counterparts, those reduced losses are not universal across all milk sheds or orders.

The evidence clearly does not support adoption of Proposal 11; volume and fat loss still exist across the industry, even at today's most efficient and innovative plants. It is important that the farm-to-plant loss assumptions embedded in the cheddar yield calculation continue to recognize these losses to maintain orderly marketing.

Leprino also opposes Proposal 12 because it does not reflect the realities of manufacturing. Similar to the cheddar yield factor, however, it is based upon a theoretical yield approach that assumes a perfect system with no losses before or after the conversion of solids non-fat ("SNF") into nonfat dry milk. In-plant losses exist not just with average, but with even the best manufacturing practices.

For example, it is well known that cream includes some SNF in addition to butterfat and water. Therefore, one cannot assume all SNF is captured in nonfat dry milk. Since cream is sold on fat value, there is no direct value assigned to the skim solids in cream. Therefore, milk could be overpriced relative to its value leaving the market ripe for disorderly marketing. This was well-stated in the February 7th, 2013 Final Decision (p. 9273): "It is important that the product-price formulas reflect current plant conditions, not plant conditions that may be possible but not reflective of general

industry wide conditions."

For these reasons, Leprino Foods opposes Proposals 10, 11 and 12.

Q. Thank you, Ms. Krebs. One follow-up question. Why is cherry-picking yield factors a risk from a policy perspective?

A. Yep. Thank you.

I think -- yeah, I'm certainly not a deep expert on cheese manufacturing. My expertise is more in the realm of policy. And I think the aspect that we're looking at here is if you are only adjusting yield factors that potentially increase the price of milk, and you are not looking at, for example, whey cream and that pricing, you could get into a situation where you are unintentionally adjusting things just in one direction, and that may not be where the marketplace is right now.

And so, you know, one analogy that I come up with is folks are familiar with the Far Side cartoon where you have got the guy is rowing the Viking boat. And on one of the boat you have these great, big, burly, strong guys, and on the other side of the boat you kind of had these skinny, scrawny guys. And one guy says to the other, "You ever feel like we're rowing in circles?"

And so it really comes down to, do we have that sense of balance within the industry in the formulas. And if we just look at those factors that could increase that price of milk, are we in a situation where we could risk having some more disorderly marketing.

You know, for example, I think it was -- it was one of the two cheese makers from Wisconsin last week that testified that they used Double O vats. And then another one of them talked about buying milk from several smaller farms. And, you know, those situations, are you getting that butterfat retention? What is the farm-to-plant loss that's happening?

And so, you know, maybe it's just pricing adjustments that have to happen at the farm level for those -- those particular plants to remain competitive or do adjustments like this potentially run those types of plants out of business, and then a farmer loses a market for their milk.

So I think we need to be cautious about just updating and selecting individual aspects of the formula to update. And then I think from the other perspective it's the whole notion of do we really have broad representative data that goes sufficiently across the industry to have solid evidence to build that policy on.

Q. Great. Thank you.

MR. NIELSEN: I will yield the witness for cross-examination.

CROSS-EXAMINATION

BY DR. CRYAN:

Q. Roger Cryan for the American Farm Bureau Federation. I'm sorry, I forgot to say that earlier today.

Hello, Ms. Krebs, nice to see you.

A. Likewise.

Q. Just to understand, you're -- what you are -- you are saying is that if you are going to adjust the yields in the formulas, you have to have a mandatory audited survey to -- to get the best data in order to do that across the board?

A. That's not quite what I said. I think with yield factors, we haven't had a way to get representative data across the industry. For other proposals, such as Make Allowances, we do have a history of generally accepted studies that have been produced that provide us with evidence and data.

Q. Is it easier to measure yields directly than costs for across the whole plant?

A. You know, I'm not an expert for plants, so I can't answer that.

DR. CRYAN: Okay. Thank you.

THE WITNESS: Uh-huh.

CROSS-EXAMINATION

BY MR. MILTNER:

Q. Good afternoon, Ms. Krebs.

A. Good afternoon.

Q. Ryan Miltner representing Select Milk Producers.

So if we oversimplified the whole end product pricing schema, we'd start with a surveyed price of a commodity, we subtract the cost of manufacturing that commodity, and we'd multiply that times a yield factor, and we get some value, correct?

A. Correct.
Q. And in this hearing, you would agree IDFA has one of the proposals to change the allowance, the Make Allowance part of that formula, correct?
A. Uh-huh. Yes.
Q. And there are other proposals that would change what prices, what surveyed commodities we'd plug into that formula, correct?
A. Yes.
Q. Okay. And yet I think your statement says that we should not look at any individual aspect of the formula, we should look at it in total.
Did I get that correct?
A. I think that's a matter of nuance. I -- I wasn't intending to say that you can't look at aspects of the formula.
Q. You -- IDFA thinks we should look at the allowances, correct?
A. Yes.
Q. IDFA does not think we should look at the yields, though, correct?
A. That's a concern that -- and I'm here representing Leprino Foods Company. But, yeah, we -- we have a concern that you just don't have the data that's needed to make a good judgment at this time.
Q. So Leprino believes we should look at the allowances, though?
A. Yes.

Q. But Leprino's position is that we should not at this time look at the yield factors, correct?
A. Correct. It's just limitations on data.
Q. Okay. Let's start looking at your statement because I have a few questions at different parts of it.
A. Okay.
Q. On the first page, third paragraph, in the middle of the paragraph, you state, "While we do not dispute that some cheddar plants achieve a 93% fat retention that is proposed, this was also the case at the time the current factors were established."
Do you recall USDA's comments on a higher butterfat retention at the time of that decision?
A. No, I do not.
Q. If the comments were something along the lines of, that might be achievable, but there's no evidence that it's broadly achieved, would that surprise you?
A. No, that would not.
Q. And so if that number were now broadly achieved, would that change Leprino's position on whether a 93% fat retention is appropriate to incorporate in the formulas?
A. I think if we had that data that demonstrated that, that that would certainly be worth looking at.
Q. Okay. And ultimately the Department's decision to determine whether there's sufficient data to change that, correct?
A. Yes.
Q. On page 2, at the first full paragraph, you refer

to Congressional grants of authority to conduct mandatory cost of processing studies, and you note that yield data, which includes butterfat recovery, "could become part of this process as well."

I don't want to belabor the discussion we have had at the hearing about how long that process might take and -- and whether Congress would actually pass something, but do you know if inclusion of yields is currently in the proposed legislative language being discussed?

A. My understanding is that, yes, it is.

Q. Okay. Further on page 2 you state that "the 2017 Census of Agriculture noted that just 8.8% of farms produced at least 39,500 pounds of milk per day."

Did you calculate at all the volume of milk production that comes off of farms that can produce at least 39,500 pounds of milk per day?

A. I did not calculate the volume.

Q. It's -- it's a super majority of the volume of milk produced, though, isn't it?

A. I wouldn't doubt that at all.

Q. And so for Leprino's plants, a super majority of the milk you receive comes on tankers that have single-farm deliveries or single-farm pickups, correct?

A. For some of our plants, yes. I would say for three of our plants, one in particular, that that certainly is not the case. And so I think it varies from milk shed to milk shed.

Q. Do you have the data for Leprino as a system or as

a total company?

A. Not with me, no.

Q. Would that have been useful to provide in your statement, do you think?

A. It could have been. I -- I don't know if we directly have access to that since we purchase the vast majority of our milk through cooperatives or other handlers.

Q. On page 3, in the third full paragraph, the last sentence, "It is important that the farm-to-plant loss assumptions embedded in the cheddar yield calculation continue to recognize these losses to maintain orderly marketing."

Are your comments limited to the cheddar yield calculation?

A. In that particular case, it's addressing the Proposal 11. Is that your question or --

Q. I'm curious if your criticism of Proposal 11 is limited to the cheddar yield portion of that.

A. It was intended to address the -- well, I think the risk that you have across all the proposals is if you are raising milk price to a level above a market-clearing level, regardless of what the proposal -- or calculation is, then you have some risk of disorderly market. But this particular statement was primarily aimed at the farm-to-plant shrink proposal.

Q. Okay. Thank you.

Your next paragraph, you -- you are discussing

Proposal 12, and you state that the proposal is based on "a theoretical yield approach that assumes a perfect system with no losses."

Can you expand on that what you mean by that?

A. My understanding of that portion of the formula is that it basically assumes that there's no losses, that your mass balance is -- your milk you take in, you're paying for in the products that are produced.

Q. Do you believe that the current Class IV formula makes any payment to producers for the solids that end up in buttermilk or buttermilk powder?

A. I don't know that I have the expertise to answer that question.

Q. You further state in that same paragraph that "since cream is sold on fat value, there is no direct value assigned to the skim solids in cream."

Explain what you mean by that sentence, please.

A. Yeah. We do sell cream as a company, and we are paid on a multiple of the butterfat price. And it doesn't take into account any solids that are part of that cream beyond just the fat.

Q. So do you track the cream multiples yourself?

A. I do not myself.

Q. Are you generally aware of what the cream multiple range is in a typical year?

A. I have some idea of that, but I wouldn't want to quote you a number because I'm sure I would be off.

Q. Have you -- during the past, say, six months have

you seen cream multiples, you know, reaching 140 or higher?

A. I honestly don't know, and I know that they can vary quite a bit, depending on regions.

Q. So when you say a cream multiple, that means that the cream is priced off a multiple of a butter price --

A. Right.

Q. -- whether it is a CME price or an NDPSR price, correct?

A. Correct. Yes.

Q. And so the sale of that cream, you take that butter price, and you multiply it by some factor, and that's the sales price, correct?

A. Yes.

Q. So if a buyer of that cream is utilizing all of its components, cream and other solids, that multiple captures the value of the whole tanker, correct?

A. It's priced off of fat though, so...

Q. But they are buying a tanker, correct? They are buying a tanker load --

A. Yes.

Q. -- or a tote of cream, correct?

A. Yes. They are.

Q. And the purchasers understand that they are not buying a tanker full of butterfat, they are buying 36% butterfat with some water and some other stuff in it, correct?

A. I assume they have some knowledge of that, but the

pricing is always off of the fat level -- or off of the fat price.

Q. Does Leprino intend to introduce any data on its own losses from your farms to your plants?

A. We don't have a lot of data available on that. But, no, we are not planning to introduce that.

Q. Were you here when Mr. Allen delivered his testimony on Proposal 11?

A. Yes.

Q. Do you believe he told the truth?

A. Yes.

Q. So when he testified that Select's proposals were not aimed at increasing prices but getting the formulas more precise, do you believe him?

A. I don't have any reason not to.

Q. And when he said that Select's philosophy is to help make the formulas more precise so that producers receive what Select perceives as the fair value for the milk that they produce, you don't believe he was misrepresenting his beliefs or that of Select, do you?

A. I don't believe he is. However, I think it comes down -- potentially comes down to Select Milk and their producers as opposed to the entire industry.

Q. And I don't -- I'm not trying to be theatrical.

A. Yep.

Q. But where you suggest that the proposals were cherry-picked, do you believe that the proposals Select submitted were specifically limited or targeted to those

that would raise prices versus perhaps lower prices?

A. I don't know that it was intentional, but those are the proposals that came forward. And I think that it's -- regardless of how they are affecting milk prices, we just need to be very careful that we don't end up with distortions in the marketplace.

Q. Now, either you or others -- and I think you -- have raised the issue of the value of whey cream and how that's valued. IDFA and Agri-Mark proposed the last time we did this to reevaluate cream.

Are you familiar at least that that occurred?

A. Yes, I am.

Q. Did -- and I may have asked you this before when you were on the stand -- and if I did, I hope your answer is the same, and I actually hope more I'm not repeating myself -- did Leprino consider submitting a proposal on the value of whey cream to this proceeding?

A. We had some consideration around it. And, no, you didn't ask me this question before. But we -- we had some consideration around it. But then after re-reading the prior decision, the decision basically said there's no publicly available data on whey cream pricing, and so therefore, that would not be adopted. And we looked at what data is available today, and there still is no publicly available data on price of whey cream. And so we figured we would hit the exact same roadblock again, so why put the effort into it. I think there may be an opportunity for going forward, is that something that USDA

could get added to Dairy Market News to try and get a dataset established so that that can be revisited in a future hearing.

Q. If Select looked at the same decisions on issues like butterfat recovery, farm-to-plant shrink, and nonfat yield, and came to a different conclusion that, perhaps, there was sufficient rationale for USDA to reconsider its decisions, you wouldn't consider that cherry-picking would you?

A. I think if there is sufficient broad data to support that, that that could be balanced. It's just a matter of looking across all of the different factors of the formula.

Q. When it comes -- thank you. I appreciate that.

When it comes to the issue of the yields and the formulas, do Leprino and Select at least agree that the yields should be as accurate as they could be?

A. I believe all of the formulas would be best served for the industry if it were accurate. It's just a matter of, do we have good data, broad enough data to represent that.

Q. So a disagreement on that issue of yields really comes down to perhaps a policy decision as well as a data quality decision?

A. Yeah, to me it's the -- do you have the breadth of data to make a policy decision that is going to ensure that we have the market-clearing price for milk.

MR. MILTNER: Thank you.

THE WITNESS: You're welcome.

THE COURT: Additional questions for this witness? Other than AMS I mean?

AMS, you are up.

CROSS-EXAMINATION

BY MS. TAYLOR:

Q. Good afternoon.

A. Hey, good afternoon.

Q. Just a few questions. On the first page when you talk, you want a "more comprehensive review," I think Mr. Cryan -- Dr. Cryan might have covered this, and I missed the answer.

Can you elaborate -- is that the mandatory survey that has been mentioned here many times?

A. Yeah, mandatory survey. Yeah, we do have -- for Make Allowances, you do have some other sources of data and information that are relatively broad across the industry. Unfortunately, we don't have that breadth of data available for the factors that are part of these proposals.

Q. Okay. When it comes to your discussion on page 1 about how ninety -- excuse me -- 93% fat retention is -- was achievable back in 2000.

But I think your statement is, generally, until we have data to prove that out, we should keep the 90% factor; is that correct?

A. Or whatever factor we can show is achievable on a broad basis at this point.

Q. And achievable is different -- you mean achievable or is being achieved?

A. Broadly being achieved.

Q. Okay. And do you have any data to talk about what is being achieved currently?

A. Unfortunately I do not.

Q. And just to make clear for the record, I'm -- is it correct that mozzarella fat retention would not be the same as cheddar fat retention?

A. That's my understanding, but I'm not an expert in that area.

Q. You're more of an expert than I am in that area.

I was wondering on the last page, page 3, that bottom paragraph that talks about your opposition to Proposal 3. I don't think we're following kind of the -- all of the logic that you have in that. So if you could just try to summarize your opposition to that proposal for us.

And I state that because, as I'm understanding that proposal, is to account for buttermilk powder in the nonfat dry milk yield, but yet I don't see that particular point.

A. Yeah. You know, quite frankly, I'm not an expert in the buttermilk powder realm of things. I think it's really more about what I'm intending to say is sort of in that -- again, that mass balance view of the world, there historically is some demonstration that there are in-plant losses or losses throughout the processing -- processing

process. And so you have got milk going in, you have got product coming out, and those don't necessarily match perfectly. So if we can get a better understanding of how those pieces fit together, then I think we would be better informed to make those decisions from a policy perspective.

Q. Okay. I'll ask another kind of question on that realm.

Why would you think it's appropriate to continue the policy that in-plant losses are accounted for in the formulas and by extension, then, are accounted for by the price that the farmer receives?

A. Could you ask that again, please?

Q. Sure. So the farm-to-plant losses are intended to realize that all the milk from the farm doesn't necessarily make it to the manufacturer. It gets lost in that. And we can debate whether that happens now or what the right percentage is, but theoretically that's what it represents.

A. Sure.

Q. And in-plant losses represent the losses in the manufacturing process.

A. Uh-huh.

Q. Those losses are not in the control of the farmer.

A. Correct.

Q. So my question is, why is it appropriate -- or your opinion on the appropriateness of continuing accounting for those losses in the formulas that do impact

what the farmer gets paid, even though they don't actually have any control over those in-plant losses?

A. Okay. If I understand you correctly --

Q. Uh-huh.

A. -- you're -- on the in-plant losses, it may not be something that over which the farmer has direct control, but it's a reality of the industry. And it's a cost of doing business and a reality that we experience as processors. So I think, again, that's valuable information for the industry to understand as we look at how we value products, how we value and go through the manufacturing or formula process because it's part of our system.

Q. Yeah. That answers it.

A. Am I close?

Q. So this question always pops in my mind when I think about things, and you are just the lucky person on the stand to be here when it popped in my mind today. But I always think to myself kind of why is that not accounted for on the price end from the processor and instead is accounted for on the back end to the farmer?

A. Well, for -- I mean, the farm-to-plant losses, yes.

Q. I -- yeah, I'm not talking about that.

A. Okay. I don't know that I have anything more to offer.

Q. Another conversation for when we can talk about it when this hearing never gets done.

A. There you go.

MS. TAYLOR: I think that's it. Thank you.

THE WITNESS: Sure.

THE COURT: Anyone else?

Okay, Mr. Rosenbaum.

CROSS-EXAMINATION

BY MR. ROSENBAUM:

Q. Steve Rosenbaum, International Dairy Foods Association.

Is it fair to say the Federal Order system is predicated on the notion that processors should pay for milk based upon what money they can derive from selling the products that they milk -- make with that milk, correct?

A. Yes.

Q. And if, in fact, there's routinely a loss of milk in the processing itself, obviously it doesn't result in product that can then be sold, correct?

A. Yes, that's correct.

Q. And does the present formula, when it comes to in-plant losses, essentially assume that, in fact, you have been able to turn 100% of the milk that you received into a useful, saleable product?

A. Yes.

Q. Is that -- is that -- and does that appear to be an inaccurate assumption to the extent that, in fact, there are inherent losses of milk during the processing itself?

A. Yes.

MR. ROSENBAUM: That's all I have.

THE COURT: Is that it for cross?

MR. NIELSEN: Thank you, Ms. Krebs.

Your Honor, at this time I would move to admit Exhibit 227 into the record.

THE COURT: Objections?

Seeing none, Exhibit 227 is made a part of this hearing record.

(Thereafter, Exhibit Number 227 was received into evidence.)

THE COURT: Thank you, Ms. Krebs.

I'll swear you in while we have a minute. Please raise your right hand.

MIKE BROWN,

Being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. ROSENBAUM:

Q. Good afternoon, Mr. Brown. Good to see you again. I have placed before you a document that's been marked as IDFA Exhibit 44.

Is this your testimony regarding Proposals 10, 11, and 12?

A. Yes, it is.

MR. ROSENBAUM: Your Honor, I would ask that this be marked as Hearing Exhibit 228.

THE COURT: Yes. So marked.

(Thereafter, Exhibit Number 228 was marked for identification.)

BY MR. ROSENBAUM:

Q. Mr. Brown, could you please read the testimony?

A. Yes.

This testimony is submitted on behalf of the International Dairy Foods Association, or IDFA, in opposition to Select Milk Producers, Inc., Proposals 10 through 12.

Q. Mr. Brown, I think you can skip your discussion --

A. Okay.

Q. -- about who IDFA is and who you are. You have testified several times.

A. Yeah. There may be one new person, though, you never know.

Q. Sure.

A. Summary of IDFA's objections to Proposals 10, 11, and 12.

IDFA opposes Proposals 10 through 12. These proposals seek to raise the butterfat recovery in the Class III formula, eliminate farm-to-plant shrink, and change the nonfat solids factor. While Select Milk Producers has supplied some internal data in support of these proposals, USDA does not have the benefit of any broader industry or USDA studies relevant to the consideration of these proposals.

When examined, it becomes clear that the proposals would require pool handlers to pay for butterfat that

cannot be uniformly recovered or valued at the Grade AA price, pay for milk that may not actually be received in the cheese vat for manufacture, and for nonfat solids presumes a theoretical, rather than a real world system, where there are no losses before or after the conversion of solids nonfat into nonfat dry milk.

Further, the proposals choose to update only factors that are revenue enhancing and ignore others, like the current overstated whey cream valuation in cheese making.

Select estimates that the added revenue from these changes totals $0.12 to $0.13 per hundredweight to the Class III price, and $0.41 to $0.42 per hundredweight to the Class IV price.

But yield factors should not be addressed piecemeal, but rather in a more holistic fashion, examining all factors that impact product yields, including factors not discussed in the proposals that counterbalance Select's chosen factors for evaluation. The proposals should be denied.

How Proposals 10, 11, and 12 would operate.

A: Proposal 10 would increase butterfat recovery in the Class III formula to 93%. Proposal 10 would increase the butterfat recovery in the Class III formula to 93%, which results in a corresponding increase in the butterfat yield in cheese to 1.624.

According to Select's analysis, adoption of the this proposal would have increased the Class III price by

$0.04 per hundredweight as compared to both the five- and ten-year average.

MS. TAYLOR: Mr. Brown, could you slow down a little bit?

THE WITNESS: Yes, I can.

MS. TAYLOR: Thank you.

THE WITNESS: Proposal 11 would update specified yield factors to eliminate farm-to-plant shrink. Proposal 11 would update the yield factors for butterfat to 1.22 --

(Off-the-record discussion took place.)

THE WITNESS: So I'll start with B again.

Proposal 11 would update specified yield factors to eliminate farm-to-plant shrink. Proposal 11 would update the yield factors for butterfat to 1.22, for the protein value in cheese to 1.386, and for the butterfat value in cheese to 1.582. Select asserts that the yield factors for nonfat solids and other solids remain unchanged due to rounding.

C: Proposal 12 would update the nonfat solids factor from .99 to 1.03. Proposal 12 would replace the current nonfat solids yield factor of .99 with 1.03. According to Select's analysis, adoption of this proposal would have increased the Class IV price from $0.35 to $0.36 per hundredweight, as compared to both a five- and ten-year average.

D: Select Milk Proposals 10 through 12 are taking a piecemeal rather than a comprehensive approach to

formula yield changes. Unlike multiple studies over the past several decades that collected data from multiple different manufacturing facilities owned by many different companies with respect to the cost of manufacture for the purpose of setting Make Allowances, Select presents no such studies with respect to its yield assumptions and losses, both before and after plant receipt and throughout the production process. Instead, Select simply relies on its own internal data regarding its own facilities.

IDFA supports maintaining the status quo until a much broader base plant study is completed that establish real world yields, shrinkage, and dairy solids recovery, including values for that recovery. There are many complicated issues, including fat recovery, plant loss, and other factors across the dairy industry. Studies will need to take into account plant ages, investments, and processing techniques. USDA should first conduct comprehensive reviews of the product yield assumptions and losses. This would facilitate making yield adjustments in a comprehensive, rather than piecemeal fashion.

E: The proposals selectively focus on revenue-enhancing elements of the yield formulas. Related to the lack of any industry studies is the fact that Select has focused on dairy farmer revenue enhancements, excluding other considerations.

For example, today's Class III formula presumes that all excess fat from cheese manufacturing is successfully recovered, 90% in the cheese and the

remaining 10% ending up in the whey but valued as sweet cream.

This presumption ignores the reality that: A, every manufacturing system incurs losses in the form of lost milk solids; and B, whey cream does not have the same value as sweet cream, despite the wishes of all cheese makers to the contrary.

Regardless of plant efficiency and full tanker loads, many in the industry, especially in the Upper Midwest and the Northeast, do not achieve full tanker loads. Furthermore, unlike Select's assumption of no farm-to-plant loss, it is likely that some purchased milk solids are lost in that -- actually, in that transportation, and data from all types of farms need to be included in any analysis that would change the current assumption of farm-to-plant loss.

We expect these yield studies can be accomplished through the widely supported surveys for inclusion in the upcoming Farm Bill. Simply put, Proposals 10 through 12 incorrectly assume that after applying the yield formulas to milk processing, there is no need to account for other losses that occur throughout the process from farm to finish product.

F: Proponents' experience is not indicative of broader experience. Select is known for its innovative approaches and very large farms that likely generate more efficient results and lower losses that are found in industrywide.

Just as with Make Allowances, it is critical that AMS examine yields across the entire dairy industry, recognizing that others do not experience the same efficiencies and likely experience greater losses. And it costs money to achieve many of these efficiencies, which in turn impacts plant costs, although we acknowledge that there would also be an adjustment for per pound product costs resulting from these investments.

Three: Proposal 10's specific flaws. In addition to the overall flaws applied to all of Select's proposals, the 93% butterfat recovery proposal assumes, first, that higher fat capture has been implemented by everyone, and two, that all butterfat recovery has equal value. Without the new yield studies mentioned above, there is no way for USDA to conclude, hat the first point is accurate.

As to the value of butterfat, the butter not going into cheese is valued under the current formula at Grade AA butter, even though USDA by regulation assigns such butterfat, known as whey cream, to Grade B butter. With 20% or greater discounts on whey cream compared to fresh cream, the Class III fat assigned to whey cream is simply overvalued under the current formula. This is in addition to in-plant losses of milk fat during processing, which the current formula does not recognize. These defects would need to be fixed as part of any revisions to current formula yield factors.

Select seeks an increase in Class III prices in Proposals 10 and 11 of approximately $0.12 per

hundredweight, but they fail to recognize the greater, more than offsetting decreases that would result from accurately accounting for both processing losses and whey cream values.

As with the butterfat recovery issue, Proposal 11 also assumes there is no farm-to-plant shrink. FMMOs price milk based on components and volumes measured at the farm, but losses occur prior to delivery to our member plants. Select, again, may be an industry leader in reducing farm-to-plant loss, but AMS should not base yield factors on one company's experience, especially given the fact that Select's dairy farmer members are large enough that they can and do deliver full tanker loads of milk, reducing the risk of leakage from farm tank to plant silo.

But less than 10% of all farms produce enough milk to fill tanker loads of milk, meaning the vast majority of trucks hauling milk are still delivering multiple loads of milk. It is therefore reasonable to conclude that the losses experienced when formulas were adopted are still happening today.

Failure to account for the diversity of farm size and the implications for farm-to-plant loss based upon less than full tanker loads of milk would further incentivize manufacturing to prefer large farms over smaller farms.

The implications to USDA's necessary small business regulatory analysis we leave to USDA, but it appears to be detrimental to smaller farms and the rural

communities that depend on those farms. As discussed in DFA member testimony, fat clings to stainless tankers just the same today as it did when the formulas were last updated.

Again, milk sheds dominated by smaller farms continue to experience larger loss of fat as a result. Proposal 11 assumes away farm-to-plant losses in both solids and fat. Until AMS conducts studies of these issues, the proposals should not be adopted.

Proposal 12's specific flaws. Proposal 12 would treat solids nonfat in the nonfat dry milk pricing formula the same as proposed for cheese, a theoretical yield approach relying on a perfect loss-less system. This is not true even with the most modern and efficient facilities, let alone average plants, often today operating without the margin necessary to make the investments that would be industry leading.

As just one example, after cream separation, some portion of the solids nonfat remains together with the butterfat and water. That lost SNF cannot then be processed into nonfat dry milk, and nearly all cream is priced on a multiple of the butter market, with no direct value assigned to the skim solids in cream. Overvaluing the volume of SNF and thus nonfat dry milk that can be manufactured will overvalue and overprice the nonfat dry milk that is market clearing and contributes to disorderly marketing.

Conclusion: Adoption of Select’s proposals would

at best be premature before widely supported AMS studies are conducted, and likely would be a step backwards because only producer revenue enhancing factors are examined. This could overstate the impact of any yield changes. Indeed, a comprehensive review would likely result in revised yields factors that subtract from, not add to, dairy farmer revenue.

MR. ROSENBAUM: Your Honor, Mr. Brown is available for cross-examination.

CROSS-EXAMINATION

BY MR. MILTNER:

Q. Good afternoon, Mr. Brown.

Ryan Miltner representing Select Milk.

A. Good afternoon, Ryan.

Q. Mr. Brown, you are pretty familiar with the whole Federal Order amendment process, aren't you?

A. It's been 15 years since I dealt with it, but fairly -- fairly -- yes, fairly familiar. I'm old enough to have been through a couple.

Q. What is the purpose when USDA issues an invitation to submit proposals?

A. Anyone can submit proposals they think need to be considered, and then USDA will decide which ones are appropriate for a hearing.

Q. So were you -- where you have criticisms -- where you have criticisms of the fact that the formulas don't assume sufficient in-plant shrink, was that not an issue sufficient enough for IDFA to submit a proposal?

A. If you don't have good data, you can't submit the proposal. And that was discussed, but we simply don't have the data to support it.

Q. Your members did not have data to document their in-plant shrink?

A. Some do, some don't. It's surprising the differences.

Q. And similarly, the issue of the valuation of whey cream was not important enough for IDFA to submit a proposal for USDA to consider.

A. Again, we just -- we discussed that very issue. And where we really came down is, is there a way that, for example, to get Ag Marketing Service to survey whey cream as well as sweet cream so we have numbers for the next round when we have an issue again. We didn't think we could provide industry data again from people that market whey cream, but we did not feel that it would be adequate proof or support for a change in recommended decision based on our past experience.

Q. And, similarly, I assume your members did not have sufficient data within their own operations to provide support for that type of proposal?

A. It didn't seem to work before. We really wanted to make sure it was something that there would be comfort with. Quite honestly, that it would be adequate. I mean, those of us who have bought and sell cream know what whey cream is worth. But I wish I had a database to share, and I don't.

Q. Similarly, what's your understanding of the purpose of a Hearing Notice issued by USDA?

A. It is a notice to consider the proposals they have decided to bring to a formal rulemaking hearing.

Q. And isn't part of the reason to let everybody within the industry or any other affected party know that if you have opinions on these issues, here's where you need to show up and let yourself be heard?

A. Yes.

Q. So where you criticize Select for only offering its own data, the whole industry knows that if they have different data that conflicts or supports Select's position, they can show up and take the stand just like you did, correct?

A. Yes, they can.

Q. Were you in the room for Mr. Allen's testimony yesterday?

A. Yes.

Q. Did you hear his testimony on farm-to-plant shrink specifically and state that if USDA felt that a reduction in the amount of farm-to-plant shrink rather than its wholesale elimination was better supported by the data, Select would accept that decision?

A. Yes.

Q. Do you believe that the current farm-to-plant shrink factors -- and by "you," I mean IDFA -- does IDFA believe that those factors, as current, are appropriate?

A. We have no data to support or -- to support or

oppose making those changes. We do know the shrink exists. It's the same challenge quantifying the information. I appreciate Select's effort to do that.

Q. Do you -- so can I restate that as IDFA doesn't know if the current factors are the right factors or not?

A. We know that they were appropriate when adopted. We do not know how they need to be adjusted today.

Q. The current butterfat retention factor in the formula is 90%, correct?

A. Yes.

Q. Does that mean that USDA assumes that that 90% has been achieved by every cheese plant?

A. No.

Q. So where you state that Select assumes that its higher fat capture has been implemented by everyone, that's not exactly precise, is it?

A. No, it is not.

Q. If, in fact, plants are achieving a 93% butterfat recovery, wouldn't that necessarily mean that they are not penalized by paying for 10% of their butterfat as whey cream, accepting your characterization of whey cream valuation?

A. Please repeat that. I'm sorry.

Q. Sure.

A. A couple moving parts there.

Q. And I probably made a compound question there.

You argue that currently the formula makes cheese plants pay for 10% of their butterfat at Grade AA value,

correct?

A. Yes.

Q. And that that 10% is actually more properly valued as whey cream, correct?

A. Yes.

Q. Now, accept that characterization for purposes of our questioning. If the formula were to move to 93% butterfat recovery, those plants would only be overpaying on 7% of their butterfat; would that be correct?

A. Yes. Assuming the 93% recovery is accurate for the cheese, you are correct.

Q. And accepting that the whey cream is overvalued, right?

A. Yes. That is true.

Q. On page 5, section 3, first paragraph, last sentence, this -- you are summarizing -- I understand you to be summarizing two flaws that you allege: The valuation of whey cream and in-plant losses; is that correct?

A. Yes.

Q. And you categorize those as defects, correct?

A. Yes.

Q. So where you say, "These defects would need to be fixed as part of any revision to current formula yield facts," again, that's IDFA's opinion on those points, correct?

A. Yes. But en masse, not just certain parts.

Q. But whether those need to be fixed, that sets an opinion of IDFA, correct?

A. Well, yeah, it does. It also -- and I think we all agree -- the need for good data to have these discussions, which sadly we don't currently have. Let me just say, you guys did a great job putting together information. It's just too bad it's not broader. I guess that's what I would say.

Q. And, again, any other co-op can come in and give the same data that Harmoni Campbell did, and any plant can come in and provide the same data that Cheslie Stehouwer did, right?

A. That is correct. Yes.

Q. Including IDFA's members, correct?

A. Anyone who has a role in the Federal Orders, from my understanding, yes, could testify.

Q. And the Federal Register let the whole world know that now is the time, right?

A. Yeah. Times. They were going.

Q. Yeah. Times.

At the bottom of page 7 you say, "Select seeks an increase in Class III prices."

You heard Mr. Allen testify that price increases are the result of, and not the impetus for, the proposals, correct?

A. Yes.

Q. So -- you also heard him say Select's intent is to make the formulas more accurate, correct?

A. Yes.
Q. And he -- he also testified that the butterfat recovery factor might actually decrease prices in certain circumstances, correct?
A. Yes.
Q. As a matter of fact, I think you and I had conversations about that, correct?
A. Oh, yeah, we know the percentage, yes.
Q. We know the percentage. We figured that out.
A. Hopefully we came up with the same number looking at it independently, which makes me feel better about my educated guess.
Q. I'm more concerned that we figured it out. I'll finish by asking you a similar question to that I asked of Ms. Krebs.
Do IDFA and Select share the same goals in trying to make these formulas as accurate as we can be?
A. Yes. I think we all -- well, certainly most of us would like that to be the case, yes.
Q. And if to the extent there's a difference in how we get to accuracy, those are primarily issues of policy and data, correct?
A. Yeah. And I might add, it isn't good versus evil, it's just what's the best way to get there.
Q. I would not have tried to make that characterization, but I appreciate you clarifying it.
MR. MILTNER: Thank you. That's all I have.
THE COURT: Anyone else besides AMS?

CROSS-EXAMINATION

BY DR. CRYAN:

Q. Hello, Mr. Brown.

A. Good afternoon.

Q. You are concerned about lack of data for the yield changes. Is that -- would that be addressed through -- best addressed through mandatory and audited survey of costs and yields at plants?

A. A couple comments first.

We're delighted with your leadership. Working with you and National Milk to get that in the Farm Bill was one of our primary goals. So, yes, I think that is important.

But I don't think you can let perfection be enemy of the good, if you have got good strong data that's reasonably broad covering a fair amount of product. And that would be true with yields as well, but unfortunately, we don't currently have that.

So that's -- that's where I come down.

That is the ideal. That doesn't mean it's the only path. Because we haven't had it in the past, and we still made decisions, which I think for the most part we're pretty effective.

Q. But you believe that would meet your objections to the --

A. That -- oh, absolutely. I think we all -- that's discovery we have needed since the start of Order Reform, quite honestly.

DR. CRYAN: Thank you very much.

THE WITNESS: You're welcome.

THE COURT: Any further questions? I'm mindful to take a break.

Did you raise your hand earlier? Very good, sir.

AMS?

MS. TAYLOR: I think Mr. Miltner.

THE COURT: Oh, I'm sorry.

CROSS-EXAMINATION

BY MR. MILTNER:

Q. I left a note at my seat that had one more question on it.

Mr. Brown, where you talk about the majority of trucks on the road coming from multi-farm stops, how did you come up with that number?

A. That -- that -- it shouldn't -- it's not majority of trucks, it's majority of farms. Again, the volume statements you made earlier are probably accurate. I don't have the data.

Q. Okay.

A. Yes.

Q. I didn't want to try to do the calculation, but that didn't make sense to me.

A. No. Hopefully that helped clarify.

Q. It did. Thank you.

A. You're welcome.

THE COURT: Okay. AMS?

MS. TAYLOR: Good afternoon.

CROSS-EXAMINATION

BY MR. WILSON:

Q. Good morning, Mr. -- good afternoon, Mr. Brown.

A. Good afternoon.

Q. Todd Wilson, AMS.

I have a question on page 7 in discussing Proposal 12's flaws. And we heard this from Ms. Krebs a few minutes ago about theoretical yield approach.

Is it your understanding that the theoretical yield approach that you reference is the concept of accounting for buttermilk powder in the milk solids nonfat part of the Class IV nonfat solids price calculation?

A. Currently? Not directly. I mean, it's inferred. We read recommended decisions that this is discussed --

Q. Can you speak closer to the mic?

A. I'm sorry, yes.

If you -- if you -- if you -- from my recollection -- again, my brain doesn't work like it used to -- but, yes, it was discussed as part of that entire discussion on how you value nonfat solids in milk. But it -- it's -- and I should remember because I was with Darigold when this was discussed the last time -- but as far as the detail of it, honestly, I don't remember.

Q. So in your statement you have, on the -- in the first sentence after the hyphen, "a theoretical yield approach relying on a perfect loss-less system."

Can you elaborate a little about more about what you mean by those?

A. What I mean is that the yields -- when you're looking at yields in a plant, your yield should include loss. I mean, it should, because that's the -- I mean, if we're looking at value of milk, it's price times quantity, more or less, on the different components, and so it should be part of that consideration.

Does that mean that we have work to do on formulas to make them more complete? Yes, I think that we do as far as product yields.

MR. WILSON: Okay. Thank you.

MS. TAYLOR: That's it from AMS.

THE COURT: Thank you.

REDIRECT EXAMINATION

BY MR. ROSENBAUM:

Q. I mean, Mr. Brown, just to clarify, maybe it's clear already, but when you refer to a loss-less system, are you simply referring to the fact that the current pricing system assumes that all the milk that comes into the plant goes into a useable product?

A. Yeah, the only direct adjustments from farm-to-plant loss, there are no plant losses in the current formulas.

Q. Can you say that one more time?

A. I said, the only adjustments of the farm-to-plant loss, there are no implicit plant loss as part of the formulas currently.

MR. ROSENBAUM: That's all I have.

THE COURT: Okay. Let's move the exhibit into

evidence.

MR. ROSENBAUM: Yes, your Honor.

THE COURT: Exhibit 228?

Seeing no objections, it is made a part of the record.

(Thereafter, Exhibit Number 228 was received into evidence.)

THE COURT: Let's take an afternoon break. Come back at -- let's come back at 2:50.

Off the record.

(Whereupon, a break was taken.)

THE COURT: Back on the record.

Raise your right hand.

DR. PETER VITALIANO,

Being first duly sworn, was examined and testified as follows:

THE COURT: Your witness.

DIRECT EXAMINATION

BY MS. HANCOCK:

Q. Good afternoon, Dr. Vitaliano.

A. Good afternoon.

Q. Thank you for round three on the stand at this hearing -- no, round four. Math is getting more and more difficult as we go along. Is it five?

A. I did a short one on the barrel cheese issue.

Q. Okay. Well, nonetheless, you're here on higher-of; is that fair?

A. Yes.

Q. Okay. And did you prepare Exhibit NMPF-30 in support of your testimony today?

A. I did.

MS. HANCOCK: Your Honor, if we could mark that as Exhibit 229?

THE COURT: Yes.

(Thereafter, Exhibit Number 229 was marked for identification.)

BY MS. HANCOCK:

Q. Did you also prepare a spreadsheet that we have to talk about with the higher-of as well?

A. Yes, I did.

Q. And is that identified as NMPF-30A, as in Adam?

A. Yes.

MS. HANCOCK: Your Honor, if we could mark that as Exhibit 230.

THE COURT: Yes. Marked 230. Thank you.

(Thereafter, Exhibit Number 230 was marked for identification.)

MS. HANCOCK: Thank you.

BY MS. HANCOCK:

Q. Dr. Vitaliano, would you please proceed with your testimony?

A. Okay.

Hi. I'm Peter Vitaliano for the National Milk Producers Federation, vice president of economic policy and market research. I have been here before. I think I have put my identifying information and background

information into the record, but if there's anything that I should repeat, let me know.

I have -- my statement consists of some introductory background information on the federation and the process that our organization went through to develop a balanced set of proposals we brought to this hearing. That's already in the record, and it's in my written statement. I will not repeat it here.

The same with a later section on the overall economic impacts of our suite of proposals. Likewise, that's already been repeated -- been in the record and in our written statement. I will not repeat that.

This testimony is in support of Proposal 13 concerning the base Class I skim milk price. Proposal 13 is to restore the original Federal Order Reform Class I skim milk price mover.

NMPF requests the Secretary amend 7 CFR, paragraph 1000.50(b), applicable to all Federal Orders as specified at the conclusion of this testimony, which would replace the current Class I skim milk price mover with the original Class I skim milk price mover in effect from January 2000 through April 2019. The current language in 7 CFR 1000.50(b) is the product of two rulemaking decisions: One, Federal Order Reform; and two, the final rule implementing Section 1403 of the Agriculture Improvement Act of 2015. Understanding both of these actions is important to understanding the deficiencies of the Class I mover -- the current Class I mover during

periods of market instability since its implementation in May 2019.

In Federal Order Reform, USDA adopted a new Class I mover for the newly consolidated 11 Federal Orders to replace the basic formula price, BFP. The BFP was derived from a survey of prices paid for Grade B milk by dairy manufacturing plants processing primarily butter, nonfat dry milk, and cheese. It was, therefore, reported as a single price which blended the value of Grade B milk used to manufacture those products.

The BFP was discontinued at the end of 1999 due to the declining and increasingly unrepresentative volume of Grade B milk, and the Federal Order system subsequently adopted product price formulas, or PPFs, to determine minimum price, class prices. The transition to these new class price formulas involved the adoption of four classes of milk, including two full manufacturing use classes, III and IV, with IV to be considered to be the full graduation to full class status of the prior Class III A skim milk price.

When a new Class I mover needed to be identified, the question arose as to which manufacturing milk class price to use as its basis. The Department determined the mover should be the higher of the most currently calculated Advanced Class III or Class IV skim milk pricing factors. Federal Order Reform identifies at least four reasons for using the higher-of Class III or Class IV as the mover and base value for Class I skim milk prices.

First, basing Class I on the higher of III or IV would -- this is a quote from the Federal Order Reform proposed rule -- quote, "more accurately reflect the value of milk in those these different categories of use," in a four-class system.

Furthermore, given the separation of manufacturing milk into two classes, using the higher-of Class III and IV would, quote, "assure that shifts in demand for any one manufactured product would not lower...Class I prices," end of that quote.

Second, using the higher-of the two classes, quote, "to move Class I prices [will help] to reduce the volatility in milk prices," end of quote.

Third, a major consideration was to address class price inversions and depooling. The decision stated, and this is an extended quote: "Class price inversion occurs when a market's regulated price for milk used in manufacturing exceeds the Class I fluid milk price in a given month and causes serious competitive inequities among dairy farmers and regulated handlers... Thus, an inequitable situation has developed where milk for manufacturing is pooled only when associating it with a marketwide pool increases returns. Illustrative of the worsening class price inversion problem are the growing volumes of milk that, while normally associated with Federal Orders, are not being pooled due to price inversion problems ... Since volatility in the manufacturing product markets is expected to continue --

very good call there -- the Class I price mover developed as part of this Federal Milk Order Reform process should address this disorderly marketing situation."

And finally, the purpose was to assist Class I handlers in competing for a milk supply. With a quote starting here: "In some markets the use of a simple or even a weighted average of the various manufacturing values may inhibit the ability of Class I handlers to procure milk supplies in competition with those plants that make the higher-valued of the manufactured products. Use of the higher-of the Class III or Class IV price will make it more difficult to draw milk away from Class I uses for manufacturing," end of that quote.

And finally, indeed the Department recognized, one final quote here: "The provisions adopted in the [Federal Order Reform] best fulfill the requirements of the Agricultural Marketing Agreement Act," end of quote.

Accordingly the Department concluded that the higher-of the most current Class III or Class IV value should be the mover for Class I prices. The pricing for the Class I mover prevailed in all orders of the Federal Order system until the 2018 legislation.

Section 1403 of the Agriculture Improvement Act of 2018, which was implemented in the 2019 Final Rule, changed the Class I mover to the current language, which uses the average-of Class III and Class IV prices, plus a fixed differential of $0.74 per hundredweight. This legislative change in the mover resulted from a request by

Class I handler representatives to change the mover to one that would better allow them to hedge the cost of Class I milk in the dairy product futures markets.

NMPF (sic) to this request, subject to the incorporation of the $0.74 per hundredweight fixed differential. This differential represented the average value that the higher-of Class III and IV contributed to the Class I mover, above the average-of Class III and Class IV from 2000 through August 2017.

Thus, the intention of both Class I milk buyers and dairy farmer sellers was that the change would be revenue neutral and would accommodate the buyers' desires to better manage their price risk without harming the sellers. The Department reflected this understanding of the amendatory language when promulgating the Final Rule.

This is a quote: "The change in the Class I price formula applies uniformly to both large and small businesses. The dairy industry has calculated that applying the higher-of provisions to skim milk prices has returned a price $0.74 per hundredweight above the average of the two factors since the pricing formulas were implemented in 2000. Thus, the inclusion of the $0.74 in the calculation should make the change roughly revenue neutral [emphasis added].

"At that same time, it is anticipated that using the average of the Class III and Class IV advanced pricing factors in the Class I skim milk price formula will allow handlers to better manage volatility in monthly Class I

skim milk prices, using Class III and Class IV milk futures and options. Until now, uncertainty about which class price will end up being higher each month has made effective hedging difficult. Amending the Class I skim milk price provisions may help small businesses better utilize currently available risk management tools," end of quote.

This was effectively an early recognition by the Department of the growing importance of price risk management and the potential need for the Federal Order price mechanisms to accommodate this. But notably, this statement did not reference nor discredit the four reasons for originally adopting the higher-of mover elucidated in the 1999 Final Decision. Because the 2019 amendment has not functioned as intended, or anticipated by NMPF, has exacerbated disorderly marketing conditions, has not been revenue neutral, and will continue to have deleterious effects on the dairy industry so long as it is in place, the change contained in Proposal 13 is requested.

Disorder caused by the average-of plus $0.74 per hundredweight Class I mover: Comparing the higher-of Class I formula in operation from January 2000 to April 2019 to the average-of plus $0.74 per hundredweight Class I formula, in operation since May 2019, reveals a clear asymmetrical impact. The higher-of Class I mover will exceed the average-of Class I mover whenever the Class III and IV advanced skim milk pricing factors differ by more than $1.48 per hundredweight. It does not matter

which of the advanced skim pricing factors is higher. The reverse will be true whenever the advanced skim pricing factors differ by less than $1.48 per hundredweight.

Thus the maximum amount by which the average-of Class I mover can exceed the higher-of Class I mover is $0.74 per hundredweight, which occurs when the two advanced skim milk pricing factors are equal. However, there is no practical limit by which the average-of Class I mover can fall below the higher-of Class I mover.

The asymmetric price risk inherent in the current Class I mover became evident during the second half of 2020 and then again during much of 2022. During these periods the current Class I mover fell mostly and significantly below the higher-of mover.

NMPF calculates that since it became effective in May 2019, the cumulative market losses in pooled Class I skim milk values and all Federal Orders have reached 941.1 million through July 2023. Now that we have August in, that number is 998.3 million through August 2023.

NMPF greatly appreciates the Secretary's partial compensation of these losses through the two rounds of Pandemic Market Volatility Assistance program, or PMVAP payments. However, this would not have been needed if the amended Class I mover had performed as expected.

More specifically, during the four and one-third years since the current Class I mover has been in place, there have been three episodes when the higher-of mover exceeded the average-of mover, by close to $1 per

hundredweight or more. By contrast, as noted, the current average-of mover can never exceed the higher-of mover by more than $0.74 per hundredweight.

During the first of these episodes, the six months from July through December 2020, the difference between the two averaged minus $3.56 per hundredweight, generating total losses of pooled Class I skim milk value of $753.2 million, or an average of $125.5 million per month.

During the second of these episodes, the four months from August through November 2022, the difference averaged minus $1.47 per hundredweight, generating total losses of pooled Class I skim milk value of $197.8 million, or an average of $49.4 million per month.

During the third, and smallest of them, the two months of July and August this year, the difference averaged minus $1.40 per hundredweight and will generate an estimated $58 million of total pooled Class I skim milk values, or an average of $44 million per month. With the August numbers in, that is $89.6 million for the two months, for an average of $44.8 million per month.

In contrast to those three monthly loss figures during these three episodes -- to recap, $125.5 million, the second half of 2020, $49.9 million per month in the second half of 2022, and $44.8 million in the last months -- the maximum positive difference of $0.74 per hundredweight would generate a gain in total pooled Class I skim milk values of $25.4 million per month, based on average monthly producer milk volumes during May 2019

through July 2023.

Figure 1 illustrates the history of cumulative losses of Class I skim milk values from all Federal Order pools during the entire time the average-of mover has been in effect, through this past July.

Actually the one in my testimony is through this past July, the one that will hopefully show up on the screen shortly -- maybe I plugged it in wrong -- is through August.

It does not include offsets from PMVAP payments nor is it an economic analysis. But it illustrates the pattern that is generated by the increasing volatility of the Federal Order manufacturing class prices. This pattern consists of periods of relative stability during which the average-of -- thank you -- mover generates modest gains over the higher-of mover, followed by periods of volatility, described in the preceding paragraph, that generate losses that more than offset the previous modest gains. The result is mounting cumulative market losses to producers over time.

When last month is added to the analysis, the cumulative losses will amount to just about $1 billion dollars, as mentioned earlier. More detailed information relative to this analysis is provided in Exhibit NMPF-30A that should also have been handed out, the-one pager.

The change in Class I movers has increased the level of disorderly marketing during this period by reducing Class I prices relative to the other classes and

thus creating greater incentives to depool milk. Increased depooling is inconsistent with the Federal Order Reform justification that the Class I mover should reduce the disorderly marketing conditions created by class price inversions and depooling.

The enhanced demand for cheese generated in 2020 by the Farmers to Families Food Box Program, relative to the demand for butter and nonfat dry milk, widened the spread between Class III and Class IV prices well in excess of the $1.48 break point. This substantially lowered Class I prices compared to where the previous higher-of would have established them, created class price inversions, and generated extensive depooling of Class III milk during the second half of 2020. This was inconsistent with the Federal Order Reform justification that the higher-of mover would “assure that shifts in demand for any one manufactured product will not lower ... Class I prices." That was a quote, that last phrase.

Class price inversions recurred in 2022 because of an unusually long period of tight milk supplies. This led to relatively high Class IV skim milk prices, as cheese and whey plants continued to receive relatively adequate milk supplies while butter and nonfat dry milk plants played their traditional balancing roles, producing reduced volumes during periods of tight milk supplies. The result was, again, price volatility and substantial depooling of Class IV skim milk.

The third, shorter incident in the summer of 2023

resulted when cheese and whey prices fell due to excessive milk supplies relative to domestic and reduced export demand, while butter prices remained robust, pressuring Class III skim milk prices relative to those for Class IV skim milk.

Hence, a wide variety of market conditions have proven to be capable, on a seemingly regular basis, of generating market volatility that drives Class III and Class IV skim milk prices sufficiently far apart to drop the current Class I skim milk price mover more than $1 a hundredweight below the higher of the two, while periods of relative market stability are needed to allow the current mover to fall within its strictly limited range of $0.01 to $0.74 per hundredweight above its Federal Order Reform predecessor.

In sum, the average-of Class I mover is inconsistent with USDA's Federal Order Reform justifications for the higher-of and does not operate as intended because it builds in an unintended asymmetric risk to producer income, which has resulted in nearly $1 billion of losses in producer income in little more than four years of operation.

The current Class I mover dramatically increases the marketing disorder represented by volatile volumes of depooled milk. Market and price volatility continue to be a basic feature of dairy markets and can be anticipated to occur in the future. Little to no data has yet been provided to suggest that the average-of Class I mover has

facilitated actual risk management activity with a total value to produce fluid milk processors anywhere near the magnitudes of the quantifiable losses it has dealt to the nation's dairy farmers.

The experiment with the average-of Class I mover must therefore be deemed a failure, and the Federal Orders should be amended to return to the higher-of formula. That is the proposed solution. NMPF proposes to amend the Class I skim milk price mover to return it to its original form, as initially adopted in Federal Order Reform; namely, the higher-of the Class III and Class IV Skim Milk Pricing Factors. All of the reasons the Department cited for its original decision, as previously summarized, still apply -- and likely even more so -- to contemporary dairy markets and will doubtless continue to do so going forward.

In its lengthy and thorough deliberations and analyses, the group of experts that developed NMPF's package of Federal Order modernization proposals deliberately maintained, and included in its recommendations to NMPF's policy-making bodies, an alternative to returning to the higher-of mover that retained the basic average-of mover mechanism and incorporated a periodic recapture of any lost Class I skim milk pool revenues relative to the higher-of mover.

This alternative was unanimously rejected in favor of returning to the higher-of mover. While this alternative, and the similar Proposal 14 submitted by IDFA

and Proposal 15 submitted by the Milk Innovation Group, all effectively adopt the higher-of as the standard for generating Class I skim milk price revenue to dairy farmers through Federal Order pools, they all do so in an after-the-fact manner that fails to maintain the maximum monthly separation between the advanced Class I and the manufacturing class prices that generates the best performance for a Class I mover identified by the Department in Federal Order Reform.

This testimony provides an overview of NMPF's justification for adoption of Proposal 13. More detailed testimony will follow that supports all, or key provisions of, Proposal 13, including testimony provided by Craig Alexander, representing NMPF member cooperative Upstate Niagara Cooperative, other members of the NMPF task force that developed NMPF's Federal Order modernization proposals, an expert witness from another organization, and producers who are members of NMPF member dairy cooperatives.

NMPF sincerely wishes to thank Secretary Vilsack and the Department for holding this important hearing and for thoughtfully considering adoption of its proposed and balanced amendments to the Federal Milk Marketing Order regulations. NMPF has devoted considerable time and resources to thoughtfully considering and recommending the important changes it considers necessary to correct the growing misalignment between the dynamic changes in the U.S. dairy industry since Federal Order Reform and the

largely unchanged factors in the critical Federal Order component and class price formulas originally adopted at that time.

Together, NMPF is requesting the Secretary to amend certain provisions of 7 CFR 1000.50-52, applicable to all Federal Milk Marketing Orders. The changes to these regulations that Proposal 13 would entail are as follows, as shown on the screen. This is the simplest of all our recommended language changes. And it would simply change the 1000.50(b), the Class I skim milk price. The Class I skim milk price per hundredweight shall be the adjusted Class I differential specified in 1052, strike the next section. As mentioned, all of my recommended Federal Order regulatory language changes incorporate all five of our recommendations. So this -- this next strike-out is pertinent to our support for Proposal 19 on Class I differentials. But then continuing, plus the higher-of, instead of the simple average-of, the advantaged pricing factors computed in paragraph (q)(1) and (2) of this section, rounded to the nearest cent.

Q. Thank you, Dr. Vitaliano.

I just want to highlight a couple of things in your testimony to make sure that we're clear on what we're doing.

On page 4 of your testimony, this -- this is in the middle of the section where you are citing some of the historical changes that had evolved to get to the average-of mover; is that fair?

A. Which paragraph are you citing there?
Q. I'm just putting this into context that this is the section that we're in; is that right?
A. Okay. Yeah. And are you talking about how National Milk and the processor groups came to the agreement to make the change?
Q. Well, and just that you are providing the historical context --
A. Yes.
Q. -- on page 4 there?
A. That's correct.
Q. And so when you are in -- on the last half of this page where it starts off and it says, "Federal Order Reform identifies at least four reasons for using the higher-of," starting there in that section, that's what you have cited down below in the footnotes there where you are citing to the actual Federal Register; is that right?
A. That is correct.
Q. Okay. And so when you are talking about Federal Order Reform, that's -- what you are citing there was first in 1999, the Federal Order, and from that April 2nd, 1999, Federal Register that's cited there?
A. That's correct.
Q. And then you go on to talk about the legislative change as well on the next page.
A. Yes. And the legislative change was also footnoted on page 4 for the March 11, 2019, Federal Register notice. And that continues through the first

full paragraph on page 5, also stemming from that 1999 Federal Order Reform Federal Register notice.

Q. Okay. So I want to jump ahead to page 6, and I'm hoping that you can expand a little bit more on the calculation that -- I think sometimes when the economists do math, at least for me, it takes me a couple of times to hear it to make sure I understand what you are saying. But you have done a calculation there that shows the effect of that -- the average-of essentially providing a cap on the -- on the delta that can occur between the prices. Is that fair?

A. That's correct.

Q. Can you expand on that or maybe even just reiterate it in a more anecdotal way that can really help capture what you are talking about there?

A. Certainly. It's not economics, it's arithmetic.

Q. Well, it's all the same to me.

A. When -- if you take two numbers and take their average, the average between two simple real numbers is going to be halfway between those two, and the higher-of is going to be the higher-of those two. So as -- consider taking two numbers, when they are both the same, the average of them is the same as both of them, which is obviously, therefore, the same as the higher-of the two.

As the two numbers separate, no matter which one goes up or down, the further apart they get, let's say you have -- you know, both numbers are 10 and 10. If one of them drops to 8, the average is 18 divided by 2, which is

9, which is halfway in between. So the average-of two numbers will always be halfway between the difference between the two numbers.

So if the -- in this case, when we take the average-of two numbers and add $0.74 to it, the average-of plus $0.74 will be $0.74 higher than the higher-of the two numbers when they are the same.

As the two numbers deviate, once they get to be twice $0.74 apart, $1.48, then the average will be basically the same as the higher-of, Because the average-of will be $0.74 below the higher-of, you add $0.74 back into the average, and it will equate.

As the two numbers fall more than $1.48, or twice $0.74 apart, then the average-of plus the $0.74 falls increasingly below the higher-of. Just -- does that -- arithmetic.

Q. Arithmetic by an economist. Okay. I appreciate that.

And then -- so -- so explain how the cap works then in comparison to the higher-of.

A. The cap? You mean the --

Q. How it becomes an effective cap.

A. That the higher-of -- arithmetically, the average-of plus $0.74 can never be more than $0.74 above the higher-of. It can fall unlimitedly below.

In the case of milk prices, since Class III and Class IV prices are likely to be not zero, maybe, let's -- let's say $10, maybe -- well, actually during the --

during the worst month of the second half of 2020, Class III and Class IV advanced skim milk pricing factors were, as I recall, about $11 and something apart. And the difference between the higher-of mover and the average-of plus $0.74 mover, the average-of plus $0.74 fell, as I recall, $5.16 below the higher-of.

Again, contrast that to the average-of could never fall -- could never rise more than $0.74 above. As I explained there, the average-of plus $0.74 is forever confined at the highest level to the range of $0.01 to $0.74 above the higher-of.

Q. Okay. So if I am just an average buyer of milk, does that mean that as the buyer, I am -- I can see -- if I'm using the average-of pricing mechanism, as the price -- or the spread between the higher-of and the lower one becomes increasingly larger, I can reap a benefit of that because the average-of is pulling that -- the lower one is pulling the price down?

A. There would be a benefit to a buyer of milk compared to having to buy milk at the higher-of price.

Q. Okay. But also as the buyer, that cap essentially comes into play because, if I'm looking at the spread -- if I'm capped essentially by that $0.74 above the higher-of, I know that there's a cap that above which I'm not going to have to pay if I'm paying under the average-of pricing?

A. That's correct. It's -- it's kind of like a regulatory-induced option for buyers of milk.

Q. Wasn't this something that was predictable back when it was established?

A. It was to some extent. But, again, the background of it was producer representatives from National Milk were very interested in -- when asked, in accommodating -- to the extent practicable, accommodating the general -- the interest of processor groups in finding something that was more hedgeable. It was an early indication, as I mentioned, of the rise of risk management becoming important in the context of Federal Order regulation and how those two did or did not fit together.

During those discussions there was a discussion about what revenue-neutral really meant. There was -- one suggestion was made that since producers were giving up something -- that it was intuitively understood that the higher-of had a certain security factor. We didn't really fully understand that arithmetic that I just went through. You know, the markets gave us a rather soon and rather brutal lesson in arithmetic on that score.

But there was a sense that we're -- you know, producers would be -- in accommodating that request from processors for better hedging ability, there was a-- there was a sense that we're kind of giving up something that has a little bit more security to it than the average. It was an intuitive understanding.

But the response was, no, this needed to be strictly revenue neutral in the sense that that $0.74 was developed, which was ultimately to look back over the

difference between the higher-of and the average-of for the entire period starting with Federal Order Reform in January 2000, up to the time those discussions were taking place, which was in the summer of 2017.

Q. Okay. But it's fair to say that at the time it was implemented, it was not only just intended, but that was the goal, was that it would be revenue neutral to the dairy farmer; is that fair?

A. That was the understanding, as well as, again, the discussion settled on an average of base mechanism fairly quickly. And in the interest of genuinely trying to facilitate risk management for the folks that, you know, our cooperatives sold milk to, there was a sense that that was -- that was probably, with maybe more trust in the history of price movements, Class III and IV, continuing in the future. In a sense, we -- we kind of sort of disregarded our own sense that the industry is evolving and capable of showing us surprises that we have not seen before. And, again, unfortunately, that was to our -- to our chagrin, actually, was -- was shown to be the case very quickly after that -- that change was made.

Q. And so if -- if -- now that we see what the effects are in the proposal by National Milk to go back to the higher-of, the opponents of that, as you understand it, are those who benefit from that price cap; is that fair?

A. Yeah. We will see what -- what transpires in the cross-examination. We recognize, because National Milk,

its original -- you know, after that -- in fact, before the second half of 2020 was done, while we were still shocked by the change, we did -- National Milk started looking into, as I had mentioned, a modification to the mover that would retain the average-of mechanism and its hedgability, but incorporating a recoup -- basically a revenue recoup mechanism after the fact, similar to that in the -- you know, the two proposals from IDFA and MIG. But we approached IDFA, you know, with that idea and were pretty soundly rebuffed.

We continued to go ahead and develop that into a proposal to USDA for an emergency hearing to make the change, but then received word that the Secretary of Agriculture, as I understand it, would prefer to see Congressional funds, through what turned out to be the PMVAP, and did not want to go to a hearing given the differences between the two groups.

Q. Okay. And -- and that's what you -- that alternative that you had considered and talked with IDFA about previously is what you believe is -- is similar to what they have proposed in Proposal 14; is that right?

A. That's correct.

Q. And -- and the downside to dairy farmers in that situation is that while they might ultimately receive the higher-of, it's not going to be contemporaneous with the actual sale of the milk?

A. That's correct. It would not meet the criteria that USDA -- the numerous criteria that USDA correctly

laid out in Federal Order Reform.

Q. And then the buyers in those situations would receive the float or the time value of a delayed payment in return for the dairy farmers not having that contemporaneous payment?

A. That was part of it, but it was more that the producers -- even though we -- as I explained, we initially came up with that idea, approached the processors, did not receive much of a welcome on that, proceeded to try to seek it on our own through USDA, were told that, let's try the PMVAP approach.

We continued to look at that all the way through our subsequent, much more detailed examination of all of the Federal Order Reform product price formulas and maintained the -- what we call the best possible average-of, all the way up to the time when we presented that and returning to the higher-of to our decision-making body.

So we kept that option of the -- you know, the recapture average-of base mover, all the way through up until we came to our -- basically our decision-making bodies chose the final package of reforms. So we gave it a thorough vetting.

Q. Before coming up with National Milk's current proposal?

A. That's correct.

And I must say that the -- the idea of returning to the higher-of is probably one of the most, I'm going to

say passionately embraced parts amongst dairy farmers in this country of our package of proposals. We have heard that testimony from several producers already.

Q. We have.

I want to talk briefly about your Exhibit 230, which is your spreadsheet showing the difference in the Class I.

A. Yes.

Q. And I don't know if you can pull that up on your screen.

A. I don't have it on here, it's rather busy. But I think we handed out the one page to everybody.

Q. Yeah. Do you need a copy?

A. Yeah. I didn't -- forget to bring one up. But I am pretty familiar with it, so I can probably answer without it. But if you want to ask something specific...

Q. Well, you had, during your testimony, mentioned that you have since had the opportunity to look at August numbers, and I wanted to just get those added to this total here.

Is it fair to say you don't know the market breakdown for August as you sit here today?

A. I have it in my computer here, but I can -- I can produce this with an updated -- I'm getting a little short of space on my -- on putting the spreadsheet on a piece of paper. But I can produce an amended version of this exhibit --

Q. Okay.

A. -- that would have August.

And what it does shows is that in the -- the second page -- page 2 of 2, on the bottom right-hand corner where it says minus 941.1, that will say minus 998-point -- whatever it was in my testimony. Basically, for all practical purposes, you know, right around a billion dollars.

Q. When you say -- did you add that on the fly when you were on page 6 of your testimony?

A. I got that from the spreadsheet and put it in so that the -- because I had -- I needed to submit this testimony in advance before I had those numbers from the Market Administrator's websites.

Q. Okay. So if we don't end up adding in a new exhibit, if we just modified Exhibit 230, it would be to change that total from 941 million to 998 million?

A. .3, yes.

Q. 998.3. Okay. Thank you.

MS. HANCOCK: That's all I have.

Your Honor, he is available for cross-examination.

THE COURT: Questions for this witness?

CROSS-EXAMINATION

BY MS. VULIN:

Q. Good afternoon, Dr. Vitaliano. How are you?

A. Good afternoon.

Q. Good. My name is Ashley Vulin. I am an attorney with the Milk Innovation Group.

I'd like to start on page 2 of your testimony,

please.

A. This is the part that has been read into the record previously, but not read into it this time.

Q. And that's -- that's fine. No problem.

About two-thirds of the way down you say, "Additionally, the United States currently sells about 18% of its milk production as manufactured products in export markets compared to about 5% in 2000."

Do you see that?

A. Yes.

Q. And that's correct?

A. Yes. I have -- for years and years, I have been calculating the percentage of U.S. milk solids that are exported and that are imported, mostly for the purpose of getting the industry, particularly the dairy producer side of the industry that has historically been more focused on imports, to realize that that's yesterday's problem, and expanding exports is the futures problem -- or challenge.

Q. Opportunity maybe?

A. And all of that, yes.

Q. You agree exports are fairly significant now of dairy products?

A. That is correct.

Q. And what products are the most commonly exported dairy products today?

A. The easiest way is to say that about -- and very consistently throughout this entire period -- about 80% of the milk solids that we export consist of what I call skim

milk ingredient product. That's milk -- that's skim milk powder, nonfat dry milk, dry whey, whey protein concentrate, whey protein isolates, lactose, the things that basically don't have very much butterfat in them, and they are ingredients that are used to reconstitute dairy products in usually state-of-the-art plants in foreign countries.

Q. And for farmer milk to be available for this export market, it has to be Grade A; is that right?

A. I'm not sure. I -- I -- I'm not sure about that. In fact, I -- I'm unable to answer it because I just don't know.

Q. And is --

A. Most of the milk produced in this country is Grade A, but I would assume that there are Grade B products -- or Grade B milk could be used in products that are exported. I'm not sure. A lot of other countries don't demand that -- you know, that our products are PMO compliant. But I don't know that. You would have to ask some experts, say, in the U.S. Dairy Export Council.

Q. And what class of milk products are the largest portion of exports?

A. I would assume that it's Class IV. We export about 7% of our cheese production, which would, you know, be Class III. But my guess is if -- I have never seen a -- sort of an export Federal Order pool. It would be interesting to see one of those to see what the utilization is, but it would be mostly Class IV.

Q. And who are the U.S.'s biggest trading partners on the export market?

A. Generally, and I can't give you an exact numerical order, but it would be Mexico, China, Japan, South Korea.

Q. And who are the U.S.'s biggest competitors on the export market?

A. The European Union, now 27 countries, that basically export kind of as a block in terms of their export policies, and New Zealand, sort of secondarily Australia, maybe Argentina. But it's basically the EU and New Zealand. They are numbers one and two; we are number three in volume.

Q. And you'd agree that the export market is a meaningfully larger portion of milk production sales now than it was in 2000?

A. Yes. My calculations are the volume of milk solids, although a different mix of fat and skim, the volume of milk solids that goes to the export market, particularly in the last two years when we hit that high of 18%, it's down a bit this year with -- but the volume of -- during those two years, I -- my -- I estimate we exported more milk solids than we consumed milk solids domestically in fluid milk products.

Q. Well, thank you for indulging my interests in the export market.

A. Certainly.

Q. I'd like to talk a little bit about your thoughts on just the theory behind pricing Class I in FMMOs.

So is it NMPF's position that Class I should always be priced off of both Class III and IV?

A. We're kind of taking our page from USDA. As I have testified many times, we support the Federal Order program. We support the product price formulas, but we think that they needed to be updated, because so many of them were kind of fixed in place with fixed numbers, you know, fixed skim milk component composition factors, fixed Class I differentials, the assumption that barrel cheese was, you know, block cheese in sort of a barrel's clothing, so to speak. Those things needed to be changed because the industry is changing, and in order for the Federal Order system to continue to be effective and functional, which we really want it to be, that those things need to change.

With respect to the Class I mover, simply because it was so flexible, unlike so many of these other things that had a fixed differential -- fixed coefficients in them, we think USDA and to use the colloquial -- USDA got it right the first time in terms of the Class I mover, and all of those factors that I quoted from the Federal Order decision on page -- basically page 6 and spilling over to -- no, on page 4 going over to page 5 -- all of those things that I quoted I think still apply, and in some cases even more so.

So that's one area where we felt USDA got it right the first time. Let's go -- and we deviated from that with the best of intentions. It turned out,

unfortunately, not to work out very well for dairy farmers, and therefore, we're saying, let's go back to what -- you know, what we -- what was right in the first place. That's our position on that one.

Q. Okay. I want to make sure I tracked the answer to my question in that.

So it is NMPF's position that, yes, Class I should always be priced off of both Class III and IV?

A. Yes. Yes.

Q. And is the only reason NMPF believes that, because it was USDA's prior policy, or what are the reasons why NMPF today believes that Class I should be priced off the both Class III and IV?

A. Well, actually, our belief that Class I should be priced off of manufacturing classes goes way beyond -- it's much earlier than Federal Order Reform, back when we just had the MW. The -- it's our understanding that a basic feature of the Federal Order formula is that a certain distance needs to be maintained between Class I prices above the manufacturing prices, especially with Advanced Class I prices that processors definitely like, and we support. That gives rise to the potential for price inversions, and even more so with Class I utilizations dropping.

Q. So why does there need to be a certain distance between the Class I price and the manufacturing classes?

A. Basically for all the reasons that USDA specified in -- in Federal Order Reform. I basically couldn't have

said it better myself. That, you know, to prevent class price inversions, to prevent changes in demand for one -- you know, one type of dairy product that would be Class -- priced off of say Class IV, from being impacted by drops in, you know, supply/demand conditions for Class IV.

Again, on page 4, with the series of quotes that I sort of put together with -- over several pages of the decision, with some elisions and insertions, I thought that was probably as good a summary of the reasons that USDA put forth back in 1999 for choosing the higher-of Class I mover, and we basically believe that those still apply.

Q. And to the extent that market conditions change, do you think those reasons should change?

A. The market conditions that are changing seem to -- as far as they affect the Class I mover, seems to be increasing volatility. And -- and because addressing Class I volatility and its -- its manifestation in depooling, we think the way the market is changed, unlike in some of the other provisions in our proposals where it requires a change in the Federal Order pricing provisions to keep them updated, we think that the changes in market conditions are actually making it more pertinent to -- for the mover to be the higher-of Class I and Class II and Class III and Class IV.

Q. So it's your position that the Class I minimum price always has to be set above both manufacturing class prices?

A. To the extent possible. That often -- with advanced pricing, Class I pricing, that does not always happen.

Q. And so --

A. But --

Q. I'm sorry. Go ahead.

A. Yeah. But not necessarily always above each one, but above the highest possible -- the highest possible one.

Q. And what about the frequency, does it need to be above each one monthly, biannually, on average yearly?

A. Ideally it would be on a monthly basis that you would have the -- we recognize that the average-of plus $0.74, or even an adjusted differential above the average-of, would occasionally be, with some frequency, above the higher-of. But nonetheless, the higher-of is one that dairy farmers are most comfortable with, most trusting of, and we think that would be -- you know, we would be content to return to the higher-of as opposed to something that was more complicated.

Q. And to the extent that setting the Class I minimum price, would you -- would you agree it's supposed to reflect the value of milk used for Class I purposes?

A. Can you repeat that question again?

Q. Is the Class I minimum price supposed to reflect the value of milk used for Class I purposes?

A. That's the -- that's the -- well, it's supposed to -- the Class I price is supposed to be set at a level

that is sufficient to assure Class I processors of an adequate supply of milk for fluid milk purposes.

Q. And from a consumer perspective, if the price of cheese goes up, is the consumer going to find themselves more willing to pay higher prices for their fluid milk?

A. Well, we had an extensive discussion on the elasticity of demand for fluid milk earlier in this hearing. Without -- without extensive volatility, generally having a Class I price that is higher than the manufacturing prices is pretty much a -- an important feature of the operation of the entire Federal Order program.

Q. And I'm not asking about the elasticity. I'm saying in your experience, does a consumer find more value in milk, fluid milk, when their cheese is more expensive?

A. Well, you are asking a question that could have been asked at any time in the history of the Federal Order program. And the Federal Order program has priced Class I -- or attempted to price Class I above cheese prices, to use your example, and the system seems to have functioned for decades and decades under that principle.

Q. Okay. And I'm asking the question though now to you, do you believe that's true today?

A. Well, if that is a -- if that is an outcome of the way the Federal Order class pricing works, then that is something that -- you know, that basically is a factor of the system that we have lived with for a long time.

We do not discount or dismiss the importance of a

Class I mover that is more hedgeable than, you know, if -- if that is possible, without being too extensively at the expense of all the other features of a Class I mover, which is what we say has basically happened at this point.

We are not dismissing -- we would like to see some data from those who wish to -- who claim they are hedging Class I with the average-of to see what the extent of that is, what a rough economic value of that ability is. We have advanced, you know, our numbers about what we have -- we feel we have suffered in terms of losses so far under the change.

But, yes. Your question, I'm not -- I'm aware that it's -- I guess where I come down on that is, if that is a feature, if the price changes and the price of cheese affect the price of Class I, that is basically something that is a factor in the operation of the Federal Order program, and it has been since the beginning of the program.

Q. So I'd like to ask a little bit more about this issue of disorderly marketing. So you say disorder was caused by the average-of because it resulted in a reduction in revenue to producers, correct?

A. It was not because it -- well, that was part of it. But the disorderly marketing that has happened basically, in a sense, violated many of the features that USDA clearly spelled out in Federal Order Reform.

Q. Are you saying that participants in the pool did not comply with the regulations?

A. No. Let me read you this quote. "In some markets, the use of simple or even weighted average of the various manufacturing values may inhibit the ability of Class I handlers to procure milk supplies in competition with plants that make the higher value to the manufactured product."

Earlier -- let me see. "Given" -- this is another quote -- "given the separation of manufacturing milk into two classes using the higher-of Class III and IV would," quote, "assure that shifts in demand for any one manufactured product will not lower Class I prices."

So this would be an incident going back to your cheese example, where shifts in Class IV demand, product demand, would not necessarily affect the Class III price and would not transmit the -- well, no, let me do the opposite.

Shifts in the price of cheese reflected in the price of Class III would not be transmitted to fluid milk processors if Class IV price was the higher-of and was setting the Class I price and was stable. Whereas cheese, to use your example, may have changed price.

Q. But what you are saying then is the Class I price wasn't high enough, correct? That that pricing signal didn't transmit to a higher Class I minimum price?

A. When there's a separation of the Class III and Class IV prices, that can bring the higher -- the average-of down, you know, almost penny for penny, penny for -- half penny for penny, whereas the higher-of has a

certain amount of stability, which was reflected in USDA's statement that using the higher-of the two classes to move Class I prices will help to reduce the volatility in milk prices.

Q. Understood.

But, again, the results of that was lower producer revenue, correct?

A. That was -- that was, yes. That was the case.

Q. And the results were not that fluid plants could not acquire their supplies, correct?

A. As far as I know.

Q. So the disorderly marketing that you have identified, it is not that fluid plants were unable to get a sufficient amount of milk for their needs, correct? It was that producers got paid less money?

A. Producers lost money, but there was depooling and --

Q. The system is designed to --

MS. HANCOCK: Let him answer the question.

THE WITNESS: Yeah --

MS. VULIN: I am having a little bit of trouble, though, getting direct answers to my questions with pretty long answers unrelated.

THE WITNESS: Go ahead.

MS. VULIN: So I understand, but I would ask that the witness try very hard to answer the question posed.

MS. HANCOCK: I think you're entitled to follow up, but you got to let him finish his answer.

THE COURT: Yeah, I appreciate that.

THE WITNESS: I'll try to keep it short. Go ahead and ask your question again.

BY MS. VULIN:

Q. So the issue that arose under the average-of was not that there were insufficient supplies of milk for fluid use, it was that producers made less money than they would have made under a different calculation, correct?

A. There was an issue with producers receiving less money, that they clearly identified as disorderly marketing. I cannot speak to whether or not fluid milk processors did not have a problem with attracting adequate supplies.

We will have experts testifying on that with Proposal -- in connection with Proposal 19.

Q. And then you identify depooling, correct?

A. Yes.

Q. Is depooling disorderly marketing?

A. In USDA's eyes, and ours, it is, yes. And we agree with USDA's characterization of depooling and price inversions as disorderly.

Q. So anytime a Class II, III, or IV handler chooses not to pool their milk, that is disorderly marketing?

A. It is, yes. We do not dispute the right of Class II, III, and IV handlers to depool when it's in their interest. But we recognize that a system in which the price relationships discourage depooling would be preferable to one where depooling was -- was common.

Q. You would agree with me that Federal Milk Marketing Orders can only require participation by Class I fluid milk handlers, correct?

A. That is correct, yes.

Q. So the decision by a manufacturing Class I handler to not pool is an inherent design of the system, correct?

A. It is an outcome of the system, yes.

Q. So it is your position, and NMPF's position, that the FMMO system, as designed, inherently causes disorderly marketing?

A. I cannot speak for National Milk on that issue.

Q. For yourself?

A. Can you repeat the question again?

Q. If the FMMO system is designed to allow manufacturing class processors to not pool, and you believe that any decision by a manufacturing class processor to not pool is disorderly marketing, then it's your position that the FMMO system, as designed, causes disorderly marketing?

A. I wouldn't state quite so boldly.

Q. How would you state it?

A. I would state it that the Federal Order system is probably correct in not requiring Class II, III, and IV processors to be pooled. There are orders, such as Order 1, where the depooling requirements are pretty strict, and that happens, and that is fine. If those -- you know, if an individual Federal Order wishes to adopt those provisions, that's fine for them. That's their

right. Most orders do not have strict, you know, depooling, anti-depooling regulations, and as a result, processors other than Class I can make those decisions.

And that's, you know, that's an inherent part of the system. It would be good to the extent that price formulas could be arranged to discourage the conditions, minimize the conditions which permit depooling, which would basically mean increasing the difference between Class I prices and the manufacturing class prices so that depooling would occur less frequently, that would be good. But we're not prepared to judge the system as deliberately encouraging depooling. That's -- that's not a characterization I would use.

Q. So you said there are instances in which it is rational for a manufacturing class handler to choose not to pool, correct?

A. Of course. Yes.

Q. What are those?

A. That is when basically the processor would receive more income from the market by depooling than they would from the market with, you know, basically paying into the pool.

Q. And would you agree with me that's an important signal from the market that the industry should respond to?

A. Could you define an important signal that the industry should respond to?

Q. If the marketplace is telling processors that that

milk is more valuable if manufactured and sold outside of the FMMO system, shouldn't processors respond to that?

A. Generally, it is in the interest of processors, whether they are cooperative or not, to maximize their income. That's -- that's the kind of system that economists would -- would designate as a healthy industry.

Q. And are you familiar with what a 9(c) handler is?

A. I've heard the term, but I would need a definition.

Q. A cooperative that is defined as a handler. Does that sound familiar?

A. Yes, cooperatives are designed -- are designated as handlers under the system.

Q. Are you aware if any cooperatives have chosen not to pool their milk since the average-of was in place?

A. Yes.

Q. And so your position is that those cooperatives contributed to disorderly marketing by choosing not to pool their milk?

A. They responded to market signals in the interest of their members, and they caused consternation in many cases to other cooperatives that did not have that opportunity because of where they sold their milk.

Q. And if we aim to peg the Class I minimum price always above manufactured prices, aren't we disrupting those external market signals that are telling the marketplace that milk is more valuable in a manufacturing plant outside of the system?

A. Can you state again the conditions you predicated your statement on?

Q. So in an instance, in the circumstances in which you agree it would be rational for a manufacturing class processor to not pool their milk, where it is more valuable being sold outside the FMMO system, do you -- do you recall that premise?

A. Yes.

Q. So in that situation, if we are pegging the Class I price above that manufacturing class price, aren't we distorting the signals that the marketplace needs to follow to know what the highest and best use of that milk is?

A. No.

Q. Why not?

A. Because the system in which the class prices would be set at appropriate levels, so that depooling was not a rational decision, that would not cause a problem. Processors, both proprietary and cooperatives, that pool their milk in Federal Orders and find themselves confronted by the circumstances in which it is rational for them to depool, and pooling regulations of their particular order do not prohibit it or discourage it, as for example in Order 1, it is a rational decision for them to depool. It's not their right to depool, in a sense, it is their -- it is in their best interest to depool.

If the system and the price formulas and the Federal Order pooling regulations were adopted to make it

difficult, more difficult let's say, to depool, that's fine, too. I'm not -- I'm not -- I'm not specifying an ideal Federal Order where depooling is a right or a necessity. I think it is disorderly if there is increasing depooling, even though it is a rational decision by the depooling actors.

Q. So it is disorderly for a market to have a -- for milk -- I'll start that again. Strike that.

You believe it is disorderly for the marketplace to value milk at a higher value for a manufacturing use than a Class I use?

A. It is disorderly if that happens on a regular basis, yes. And we have several dairy farmers who have testified and will testify that they consider depooling to be disruptive and disorderly.

MS. VULIN: I still have a number of questions, and I believe it might be time for a break.

THE COURT: Yes, I think so. Let's come back at 4:18.

(Whereupon, a break was taken.)

THE COURT: Let's reconvene. On the record.

Ms. Vulin, your witness.

MS. VULIN: Thank you, your Honor.

BY MS. VULIN:

Q. So you had talked a little bit earlier about this -- this disparity, the spread between III and IV that can develop, correct?

A. That's -- yes.

Q. And you describe that as price volatility; is that right?

A. The price volatility would be the forces that cause those two to diverge in unpredictable and sometimes in -- in rapid and extreme fashion, that's -- that creates the volatility.

Q. I think you described it as market volatility; is that right?

A. Yes.

Q. And so what are the market conditions that drive Class III and IV apart?

A. Basically, the supply and demand for Class III and Class IV products, and how they intersect and how they may differ.

Q. So does USDA regulate the supply and demand for Class III and IV products?

A. No.

Q. Okay. So USDA can't control the conditions that could lead to the spread between III and IV?

A. No.

Q. But you agree that it's -- or you maintain that it's disorderly for Class III and IV to have significant price diversion from each other?

A. That contributes to disorderly marketing, yes.

Q. That is disorderly marketing or contributes to disorderly marketing?

A. Well, depends on how you define disorderly marketing. But, okay, let's say it is disorderly

marketing.

Q. Is that how you --

A. I would defer to USDA for the definition of disorderly marketing because that's -- that's their key term.

Q. What -- how do you believe USDA defines disorderly marketing?

A. I don't know. But --

Q. And you would agree that raising the Class I price doesn't change the supply and demand market conditions that lead to the spread between III and IV, correct?

A. Are you asking if Class I demand does not?

Q. Does raising the Class I minimum price change the supply and demand factors or market conditions that drive III and IV apart?

A. Generally. No.

Q. Do you believe that USDA should interfere with the supply and demand market conditions that drive III and IV apart?

A. I don't think USDA has the authority to do so.

Q. So this disparity between III and IV, that was the source of the losses that you have described in 2020 that producers experienced, correct?

A. Correct.

Q. And if we could go, I believe it's page 6 of your testimony where you say that those losses as of July were $941.1 million, correct?

A. Correct.

Q. And how did you calculate that amount?
A. That's laid out in Exhibit NMPF-30A, which was Exhibit -- was it 230? Those are the detail calculations behind that. If you want me to go through that.
Q. No. Nope. Just wanted to know the source. Thank you.
A. That's the -- that's the source.
Q. So this is $941 million that you believe producers should have received under the FMMOs?
A. It is an arithmetic calculation, not an economic analysis.
Q. You believe that -- are you saying that producers would have had $941 million more dollars in their pockets had the formula not been changed?
A. As an economist, if I were doing an economic analysis of particularly the losses in the second half of 2020, I would have factored in a supply response where producers may have produced less milk and a lower price may have encouraged additional Class I consumption.
Dr. Scott Brown will be here sometime in the near future to present an economic analysis of our proposals. But this is, again, just an arithmetic. And we have seen a lot of arithmetic calculations, which consists of simply plugging the formula changes without taking into account any economic adjustments in supply and demand.
Q. But when I look at your Figure 4 on page 7, it is entitled cumulative producer losses due to change in Class I movers. So you are saying that is inaccurate

those were not producer losses?

A. Those are arithmetic producer losses as I identified in the -- in the text.

Q. And so then my question is, if that $941 million did not go to farmers, where did it go?

A. This was the -- basically the calculated arithmetic losses in this sheet, which is simply that chart graphs the far right column on page 2. That's those numbers.

Q. And if those are losses to farmers, then they would have been gains somewhere else, correct?

A. The implication is those are gains that accrued to Class I processors, in the sense that these are arithmetic calculations of monthly losses, they would have been -- that because of the nature of the Class I mover and the change, those would have been, by your characterization, gains to the Class I processors, savings to them.

Q. And had the formula not been changed, Class I processors would have owed $941 million more to the pool than they would have otherwise?

A. In that same arithmetic analysis -- analytical framework, yes.

Q. And where would Class I processors have gotten nearly a billion dollars to put into the pool during this time period?

A. They would have gotten that from -- basically from the marketplace. They -- they would have had -- had the Class I mover not been changed and continued to be the

higher-of throughout this whole period, that revenue would have been forthcoming from the market and would have been paid into pools, just like it had been from January 2000 though up through April 2029 -- 2019.

Q. So the billion dollars would have come from consumers, ultimately?

A. Yes.

Q. And I would like to talk about the pandemic market volatility assistance program, the PMVAP, correct? And I'll probably get that acronym mixed up at some point, so please do correct me.

You said on page 6 that -- it's at the second full paragraph up from the bottom, the second to the last sentence you said, "NMPF greatly appreciates the Secretary's partial compensation of these losses through the two rounds of the Pandemic Market Volatility Assistance Program."

Do you see that?

A. Yes.

Q. And so were these PMVAP payments meant to compensate or reimburse farmers for their lost revenue due to the base Class I skim price using the average-of formula instead of the higher-of?

A. Partly compensate.

Q. But the purpose was to compensate farmers because of the change in the base Class I skim formula?

A. That's my understanding.

Q. I -- I had thought those payments were to assist

farmers because of the impacts of the pandemic, not because of the change in the formula.

A. They were due to the pandemic market volatility, in other words, the volatility created by the pandemic which was, in terms of the severe underperformance of the current mover compared to the higher-of, was due to a great extent to the extensive Farmers to Families Food Box -- as I recall, Farmers to Family Food Box Program that -- that basically purchased very large quantities of cheese, compared to Class IV products, and created that -- that -- that severe separation of Class III and Class IV prices.

MS. VULIN: Your Honor, I would like to introduce an exhibit, and I have copies for everyone here. We'll get them passed out.

May I approach the witness with a copy, your Honor?

THE COURT: Yes, you may.

MS. VULIN: And do I give you your copy or does that come from the official copy?

THE COURT: Either way. I think it comes from sometimes one way, sometimes the other. Make sure counsel for this witness gets one, though.

MS. VULIN: And the official USDA copy is single-sided, but everyone else has a double-sided copy.

This is a document with the USDA logo at the top, entitled Pandemic Market Volatility Assistance Program for Dairy, and at the bottom has the date of November 2021.

And I'd ask that it be marked Exhibit 230, if I have counted correctly.

THE COURT: No, I have it 231.

MS. VULIN: 231.

THE COURT: Yes. So this exhibit will be marked. 231 for identification.

(Thereafter, Exhibit Number 231 was marked for identification.)

BY MS. VULIN:

Q. Dr. Vitaliano, do you recognize this document?

A. Yes. I have seen it.

Q. What is it?

A. It is a fact sheet the USDA gave out by -- on the PMVAP program.

Q. And where on this fact sheet does it identify that the PMVAP is in response to the base Class I skim mover price?

A. Well, take a look at the second bullet: "USDA payments" -- "the Pandemic Market Volatility Assistance Program provides" -- the second bullet point -- "USDA payments to dairy farmers through their handlers and cooperatives based on fluid milk sales from July through December 2020."

Based on fluid milk sales. Not on milk sales. Fluid milk sales.

Q. And how does that specify that it's based on the base Class I skim formula?

A. You would have to ask USDA which administered the

program.

Q. And was this assistance provided only to producers with pooled milk?

A. That's my understanding. Yes.

Q. Do you know how USDA determined the amount of milk eligible for the program?

A. I remember the limits they placed on it, but I think it was based on producer shipments of milk that were pooled on Federal Orders.

Q. You said the limits. What were those?

A. There were limits on 5 billion -- 5 million pounds for the six-month period, and no payments were made of that. I believe that did not pay 100% of the amount below 5 million pounds. And there were some adjusted gross income limits of, as I recall, of $900,000. That's pretty standard for a lot of assistance programs, direct payments programs.

Q. So you said the six months. Are you talking about July to December 2020?

A. That's correct.

Q. So the program was meant to provide assistance to farmers based on fluid milk sales for that six-month period, correct?

A. That's correct.

Q. But the average-of base Class I skim formula was in place for multiple years; isn't that right?

A. At that time it was in place for a little over one year.

Q. By November 2021.
A. Where do you see 2021 on here?
Q. In the green bar at the bottom.
A. That was the date of -- that this fact sheet was published.
Q. So the -- the average-of would have been in place for two years, correct? Approximately?
A. A year and a half. Yeah. Let's call it two years.
Q. Okay.
A. No, two and a half years.
Q. So USDA did not provide compensation to farmers for the entire period the average-of was in place, correct?
A. No. They only -- they only made compensation for the July to December 2020 period when the two movers seriously -- when the current mover seriously underperformed the previous higher-of mover.

And I'm not aware, I'd have to check my records, whether or not milk prices overall were particularly lower during that period compared to -- I know in 2021 milk prices were significantly low.

And so my -- my guess is that the July through December period was distinguished as a hardship period for dairy farmers, particularly because of the underperformance of the recently implemented Class I mover compared to its predecessor.
Q. And what caused the mover to underperform in your

opinion?

A. The --

Q. Actually, I have a better question. Let me rephrase that if I may.

What were market forces that drove Class III and IV apart during this six-month period?

A. They were, to a great extent, pandemic related, through the Family -- Families -- Farmers to Families Food Box Program and its extensive purchases of cheese.

Q. So the base Class I skim formula in place did not cause disorderly marketing, it's that it didn't work as intended as the result of unusual market circumstances?

A. Yeah. Right. The change in the movers resulted in the loss given the -- basically USDA's other pandemic activities.

Q. And you said that the PMVAP only partially reimbursed producers for their losses under the average-of formula, correct?

A. That's correct.

Q. What portion of the their $941 million losses did the PMVAP reimburse?

A. In the aggregate, I believe that the -- the number here is roughly 360 million. In the context of the calculations I show in Exhibit NMPF-30A is about 1 billion, arithmetically calculated. That would make the PMVAP paying in the aggregate a little over a third, compensating a little over a third of the losses for individual producers, particularly large producers subject

to the payment limitations. It was a much smaller proportion of their actual losses.

Q. There was a second round of PVMA- --

A. Yeah, I don't know. The numbers -- the round numbers I recall is 300 for the first go round and then another hundred. I don't know whether the 360 -- you may know the timing of this. I think the second round, was it after November 2021 or before?

Q. We're up here to hear your testimony on that.

A. Yeah. No, I don't know whether that second round is in these numbers.

Q. Okay. And the cumulative losses that you detailed, you said you explicitly excluded the PMVAP payments, correct?

A. That's correct.

Q. And you talked about a cap on those.

So the cap means that small producers would have likely benefitted to a greater degree than large producers under the PMVAP payments, correct?

A. Yes.

Q. And looking again at your Figure 1 on page 7, these are cumulative producer losses --

A. That's correct.

Q. -- because of the change, correct?

A. That's correct.

Q. So despite this chart detailing, you know, very negative numbers after May of 2020, the base Class I skim price formula did not always generate less revenue for

producers than the higher-of would have, correct?

A. No. If you look at the right-hand column on page 2 of Exhibit NMPF-30A, you will see some of those numbers are positive and some of them are negative.

If you look at the July through December 2020 period, you will see very large negative numbers. You will never see a number in here larger than, roughly, 25 million.

So, for example, if you look at October '21 where the current mover was $0.73 above the higher-of, that's one penny short of its maximum possible, that generated $25.5 million. That's kind of the maximum -- you know, the volumes of Class I skim milk change monthly in here. But basically you will not see a number in that right-hand column that's much over 25 million. You will see quite a few negative numbers that are quite a bit lower than a negative 25 million.

Q. And there are multiple months, it looks like even the first six, that the average-of was in place that it generated higher producer revenue than the higher-of would have, correct?

A. Right. The first year after it was in place, I was thinking, hey, we made a good deal here. That was short lived.

Q. Did NMPF think it was disorderly when the formula generated higher returns than intended for farmers?

A. The differences were not that great. I don't recall huge discussion on it. The discussion on the

change happened obviously in the second half of 2020.

Q. So it's only if prices are negative that you believe it's disorderly marketing?

A. That is an attention-catching feature of dairy markets in the minds of dairy farmers, yes.

Q. That's not quite an answer to my question.

Is it only when the formula produces less revenue than the higher-of that you consider it disorderly?

A. The instances in which the revenue from the change was positive were relatively modest and not disorderly, whereas the huge drop from -- in the second half of 2020, that's of a magnitude that I would characterize as disorderly.

The subsequent plateauing at the lower level from roughly the end of 2020 until the middle of 2022 was -- kind of mirrored the first several months where it was a modest recovery, but would not -- I would not characterize the times in which prices were increasing as disorderly, but only those periods that seem to be built into the current mover. When the difference was negative, it seemed to generate much more accelerated changes to the downside than to the upside.

Q. And this inherent kind of structural bias that you have talked about, FMMOs set minimum prices, correct?

A. That's correct.

Q. They are not meant to be market-clearing, correct, for Class I?

A. Yes. They are designed to be minimum prices.

Q. And it is the cardinal sin of minimum prices to set them too high, correct?
A. That is a basic feature of every description I have seen from USDA of the concept of minimum prices.
Q. Do you agree?
A. Do not set them too high to guarantee that every processor, manufacturer can make a profit.
Q. Same is true for --
A. Make Allowances.
Q. Yeah. But the same is true here for producer prices, correct?
A. That's correct.
Q. And so when you are looking at this asymmetrical risk, isn't it right that there is an upper limit, as you describe it, but not a lower limit, consistent with ensuring that prices do not get too far above a minimum, correct?
A. Can you repeat that question again? I'm not sure I fully understood it.
Q. If you are trying to ensure a minimum price, aren't you better off ensuring that the price does not go too high as opposed to ensuring that the price does not go too low?
A. Yes, but looking at Figure 1, it's a little bit difficult to -- to intuit or to conclude that the price has been set too high.
Q. And would you agree that a goal of the system should be price stability?

A. Price stability in -- in terms of it being the opposite of disorderly marketing. You cannot make dairy prices stop moving. You know, price -- price volatility, price changes is an inherent feature of a commodity industry like dairy, and could be even be interpreted as kind of a healthy sign. But it has -- there are extremes.

Q. And the proposed change here in NMPF Proposal 13, what impact will that have on minimum prices for Class IV?

A. What impact will going back to the higher-of have on Class IV?

Q. Yes.

A. I'm not sure it will have any impact.

Q. How about --

A. Class IV is being moved by forces relative to the markets for butter and nonfat dry milk and other things. I'm not sure that Class I supply and demand and price issues really affect Class IV prices that much. It's kind of the opposite.

Q. Thank you. I want to just to make sure I understand that.

So Class I supply and demand prices don't impact Class IV supply and demand market forces, correct?

A. Well, as an economist, if -- if Class IV prices were subject to, you know, some extreme on the upside, while usually those episodes don't last too long. But anything that would have an impact on Class I demand, given the inelasticity of demand for Class I, that's pretty small effect.

But to -- but, theoretically, yes, if there's something that -- about Class IV prices that moved Class I prices up, and effect had -- whatever effect it would have on Class I demand, much of that lost Class I sales would temporarily probably fall into Class IV.

Q. But the change in the base Class I skim formula doesn't have a direct impact on the minimum Class IV classified price, correct?

A. I don't think the higher-of versus the average-of would have that much of an effect -- impact.

Q. I'm sorry.

A. No.

Q. It wouldn't impact Class III minimum prices either, correct?

A. Probably not. I'm not saying zero impact. But a modest impact. The causation is a little different the other way. Class III and Class IV affect Class I prices.

Q. And it wouldn't have a direct impact on the Class II minimum price either, right?

A. What would not have a --

Q. Adopting Proposal 13.

A. It would have the same effect or non-effect as it has on Class IV.

Q. So the only direct impact it has on minimum classified pricing is to raise the Class I minimum price, right?

A. Yes, on average. Historically, the change in movers was not supposed to change the long-run difference

between the two -- the two movers. They were to be revenue neutral, and we expected that was the case.

It turned out that the market churned up its level of volatility, and that exploited that asymmetric risk that we would just soon have been happy to see not happen.

Q. And I believe in your testimony you said that these changes that you propose -- I should say this change in Proposal 13 will only have a modest positive impact on the average price of milk received by producers; is that right?

A. That's correct.

Q. But it's not going to be a modest negative impact on Class I, correct?

A. I'm not sure I fully understand the question. The modest impact on -- on fluid milk prices at retail is what -- is that what -- can you repeat that --

Q. I'll start that again.

A. -- part of the question?

Q. Yeah. So the change, adopting Proposal 13, will only have a modest positive impact on the average price of milk received by most small -- by dairy farmers; is that right?

A. In general, yeah. If you look at Figure 1, you will see that except for that one period in the second half of 2020, which, as I testified, we do not characterize as a once-only negative impact from the change in Class I movers, but it is -- will undoubtedly be the largest single episode of negative impact from the

change in movers. The others is more a -- sort of a continuing ratcheting down, ratcheting up the cumulative losses.

Q. But in terms of the money that producers will make from the change, you are saying it will just be a modest increase in the --

A. Over a span of time. But as Figure 1 demonstrates, the bias toward lower -- toward losses will accumulate over time. We would expect that this -- if you could extend this chart five years in the future, you would see that line heading down below a billion dollars. I would not expect to see it increase significantly, and I would not expect -- under the current Class I mover, I would never expect it to go back to zero.

Q. And so what do you estimate the impact is on Class I in moving from the current formula to your Proposal 13 on the price that Class I will have to pay their obligation to the pool?

A. I would be surprised to find in ten years or so that market researchers would be able to detect a significant change in the Class I sales from this change in movers. Class I sales are being affected by much bigger forces than the price of -- the price of milk. The Class I price of milk.

Q. So if the impact is only modest on producers and, as you claim, modest on processors, why are we here?

A. Because Class -- the change in Class I mover was disruptive from a producer standpoint. I mean, you are

asking me to say, okay, is a billion dollars of loss a minor thing for producers given the amount of money that goes -- goes to producers overall? Which is, you know, in the -- you know, what, 30 or $40 billion per year? Just talk to any dairy farmer and see whether they found the -- you know, the change in the movers to be a problem. We have heard some testimony at this hearing from dairy farmers to that effect. We're going to probably hear some more.

Q. So it's not a modest impact on farmers?

A. Not in their -- yeah. Not -- not from their perspective, and not from our perspective, either.

But in the grand scheme of things, I would expect, you know, after weathering -- because the big drop in the second half of 2020 will never be forgotten. That has permanently -- that is indelibly imprinted on dairy farmers. And -- but from now on, I would expect to be -- you know, to see a more modest but -- but steadily downward track in the cumulative losses, just like you see in the second -- the second more recent part of Figure 1.

Q. But the drop you are describing that no one will forget was partial ly reimbursed by taxpayers, correct?

A. Partially reimbursed, yes.

Q. I would like to talk for a moment about hedging. You had mentioned that earlier.

My understanding is that NMPF does not find the need by Class I processors to hedge as warranting keeping the average-of or some variation proposed by MIG or IDFA?

A. I would say that achieving multiple objectives through the Federal Order program, such as -- and please note that National Milk first introduced at this hearing the notion of the importance of hedging and risk management in terms of how that can be accommodated in the Federal Order pricing formulas by our suggestion of a 12-month implementation delay for our Proposal Number 1. And likewise, when we talked with the -- with the processors in the summer of 2017, we took totally seriously the processors' express desire to be able to better hedge Class I. There was no bad faith in that at all.

But it has turned out that in the case of Proposal 1, we found that there were -- that taking risk management factors into account is worth, let's call it some -- some level of deviation from strict Federal Order, you know, pricing regulations. The way it was explained to me is that if USDA makes a decision that a current feature of Federal Orders needs to be changed, they are under almost an obligation to change it as quickly as possible.

We're trying to introduce some nuances that if it is not too great an imposition on the normal order of business in Federal Orders to accommodate the growing importance of risk management, then it would be appropriate to do so.

In the case of the -- the importance of hedging some Class I milk by processors, the costs -- we were more

than willing to countenance the original change and to keep alive a modification of the average-of base movers to preserve that hedging as long as we possibly could have.

But in the end, our decision-making body determined that it was -- that the importance -- the downside cost of continuing an average-of base mover of whatever form was -- did not outweigh the -- you know, the problems that it caused and would likely continue to cause in the future.

Q. So despite your conclusion -- and this is -- I am quoting you here -- that the changes proposed by NMPF will have a modest positive impact on the average price of milk --

A. Yes.

Q. -- you still believe that modest positive impact does not outweigh the need for declining Class I to try and mitigate its risks on the market?

A. Yes. And because we -- we do not believe, as economists, and we have had testimony to that effect, that the price of Class I milk is not a primary causative factor in the decline of Class I sales. We are fully aware of the decline in Class I sales and how long that has gone on and the various factors that are causing it. We had an expert witness testify to that effect.

So on balance, life is full of trade-offs, and this is one trade-off that our decision-makers have decided, you know, dictates that we go back to the higher-of.

Q. And what efforts did your decision-makers undertake to determine the scope of risk management activities that fluid milk processors are using?

A. Well, I'm not sure that it was their responsibility to determine that. That it was, instead -- because these discussions have been going on for a while. We initiated them back in late 2020. We have been open to receiving any information on the importance and the growing -- the growing amount and the economic value to processors of having that risk management tool. We have not seen very much information on that.

Q. If you did receive information on that, would you support Proposals 14 or 15?

A. I cannot -- I cannot tell you that we would change our position.

Q. Even if you received information -- I'm sorry, did you --

A. If you have information, we would be happy to receive it.

Q. But even if you received it, you don't believe that would change your position on these proposals?

A. Probably not, because it's not my decision to make that change.

MS. VULIN: Nothing further. Thank you.

THE COURT: Questions of this witness?

MR. ROSENBAUM: Your Honor, it is almost 5 o'clock. It is three minutes to 5:00. I think we --

THE COURT: Can't get done in three minutes, huh?

MR. ROSENBAUM: Well, it depends how many admissions Dr. Vitaliano is willing to make in three minutes, but I think -- I think that based on past history, I don't think it's going to work.

THE WITNESS: I think you're right.

THE COURT: I would concur with that.

Let's remember to do that at the end, unless we want to make use of the three minutes.

MS. VULIN: That's what I thought. Perhaps -- so if the witness has testified to Exhibit 231, I would like to move it into admission in the record.

THE COURT: Objections?

MR. HILL: It's a USDA document.

THE COURT: It is. I think it's self-authenticating. The witness basically authenticated it.

MR. HILL: You can take notice of it.

THE COURT: I think I could. So Exhibit 231 is admitted into the record.

MS. VULIN: Thank you.

(Thereafter, Exhibit Number 231 was received into evidence.)

THE COURT: You're welcome.

All right. Yeah. Let's -- thank you, Mr. Rosenbaum.

We're doing so well, I got excited about it. It's now is a good I think we should wrap for the day.

Anything we need to take up on or off the record

before we leave? What witnesses are up tomorrow? Do we need any discussion or can you just --

MS. HANCOCK: I think we have already done it, your Honor.

THE COURT: Yeah, I think so, too. Bring us up to date.

MS. HANCOCK: Your Honor, tomorrow we will complete Dr. Vitaliano's testimony. Rob Vandenheuvel will provide rebuttal testimony on the proposals from Select.

We will proceed -- and it will not be in this order, but we will have Craig Alexander, Chris Hoeger, Sarah Stevens, and that is all the witnesses that we're going to have available tomorrow. If we are ambitious, we might finish a little bit early, but we have checked with all the parties, and as we understand it, no one has anybody else available for tomorrow. So we'll finish the day wherever we land with those witnesses.

THE COURT: Very well. We were going to go to 5:00 if necessary, right?

MS. HANCOCK: Oh, did I say Sarah Stevens? I meant Sarah Dorland. Jeez, I don't even know where Stevens came from.

THE COURT: All right. We're adjourned. See everyone tomorrow at 8:00.

(Whereupon, the proceedings concluded.)

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STATE OF CALIFORNIA)
) ss
COUNTY OF FRESNO)

I, MYRA A. PISH, Certified Shorthand Reporter, do hereby certify that the foregoing pages comprise a full, true and correct transcript of my shorthand notes, and a full, true and correct statement of the proceedings held at the time and place heretofore stated.

DATED: November 6, 2023

FRESNO, CALIFORNIA

MYRA A. PISH, RPR CSR
Certificate No. 11613