

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SYNGENTA CROP PROTECTION AG,)Case No.
Petitioner,)PGR2023-00017
vs.)
UPL LTD.,)US Patent no.
Patent Owner.)11,445,727
-----)

DEPOSITION OF BARRY JACOBSEN, Ph.D.

WASHINGTON, D.C.

JANUARY 10, 2024

REPORTED BY: Tina Alfaro, RPR, CRR, RMR

1 Videotaped deposition of BARRY JACOBSEN,,
2 Ph.D., held at the offices of:

3
4 Finnegan Henderson Farabow Garrett &
5 Dunner, LLP
6 901 New York Avenue, NW
7 Washington, D.C. 20001

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9 Taken pursuant to notice before Tina M.
10 Alfaro, a Notary Public within and for the District
11 of Columbia.

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1 APPEARANCES:

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	were not marked	

1 (Witness sworn.)

2 WHEREUPON:

3 BARRY J. JACOBSEN, Ph.D.,
4 called as a witness herein, having been first duly
5 sworn, was examined and testified as follows:

6 EXAMINATION

7 BY MR. CARSON:

8 Q. Good morning, Dr. Jacobsen. How are
9 you?

10 A. Just fine thank you.

11 Q. Have you been deposed before?

12 A. Yes.

13 Q. When's the last time you were deposed?

14 A. Probably more than ten years ago.

15 Q. More than ten years ago. Okay. So just
16 to refresh your recollection on the process, I'm
17 sure you've discussed it with your attorneys, but
18 obviously I'll be asking the questions, you'll be
19 answering the questions. The court reporter's
20 taking down everything that we say. So to
21 facilitate her job if you could wait until I'm
22 finished with a question before you start answering

1 so that we're not talking over each other, and I'll
2 likewise try to let you finish your answers before
3 I ask the next question.

4 If I ask a yes-or-no question, you'll have
5 to give a verbal answer. A head nod obviously
6 can't be captured on the transcript.

7 **A. I understand that.**

8 Q. Okay. From time to time your attorney may
9 object to a question that I ask. Unless your
10 attorney instructs you not to answer, you still
11 have to answer the question to the extent you
12 understand it. If at any point you don't
13 understand a question I've asked, please ask me to
14 clarify.

15 We will take regular breaks, perhaps every
16 hour or so. If you need a break, though, as long
17 as there's not a question pending, please feel free
18 to let me know and we'll take a break.

19 **A. Thank you.**

20 Q. I think that covers it.

21 So how many times have you been deposed?

22 **A. I don't know. It's probably more than**

1 **ten, less than 20. Over 50 years I can't remember.**
2 **I've been retired now completely for about seven**
3 **years. So...**

4 Q. Okay. Okay. So when you say you've been
5 retired completely, what do you mean by that?

6 A. I'm no longer affiliated with my
7 **university employer on a full-time basis. I've**
8 **done some part-time things and some consulting, but**
9 **that's it. I mostly play golf and train bird**
10 **dogs.**

11 Q. Okay. And you said you're no longer
12 affiliated with your university employer. Would
13 that be Montana State University?

14 A. **Montana State, that's correct.**

15 Q. But you are doing some consulting work or
16 you have since retiring?

17 A. **That's correct.**

18 Q. And do you consider the work you're doing
19 on this case to be consulting work?

20 A. **Yes, I do.**

21 Q. Are you doing any other consulting work
22 right now?

1 **A. Yes.**

2 Q. Is any of that work on behalf of UPL,
3 apart from this particular matter?

4 **A. No.**

5 Q. The other consulting work that you're
6 presently doing, is that as an expert?

7 **A. It's as an agricultural consultant for**
8 **potato farms.**

9 Q. So it's not part of any legal
10 proceeding?

11 **A. No.**

12 Q. You understand that your services that
13 you're rendering for UPL are part of a legal
14 proceeding, correct?

15 **A. Yes, I do.**

16 Q. You're serving as an expert for them; is
17 that right?

18 **A. Yes, I understand that.**

19 Q. Have you served as an expert in any other
20 legal proceedings?

21 **A. Yes.**

22 Q. Are you currently serving as an expert in

1 another proceeding?

2 **A. No.**

3 Q. When's the last time you were an expert?

4 **A. Like I said, I'm going to guess about ten**
5 **years ago.**

6 Q. Okay. And what sort of case was that?

7 **A. I believe in my recollection it would be a**
8 **marine arbitration case. I think it was cargo**
9 **wheat that went from a port in Texas to Mexico. It**
10 **could have been another case where a grain elevator**
11 **blew up in Corpus Christi, Texas. So they were**
12 **about the same time, two different cases.**

13 Q. Okay. So a marine case and a grain
14 elevator case?

15 **A. That's correct.**

16 Q. And the deposition that you did ten years
17 ago, was that part of one of those two cases?

18 **A. Yeah. I'm trying to remember -- yes.**

19 Q. But you don't remember which one?

20 **A. No.**

21 THE REPORTER: I'm sorry. You both have
22 to keep your voices up. Thank you.

1 Q. So prior to your work on this case you had
2 not served as an expert in the last ten years; is
3 that fair?

4 A. In a legal case, no.

5 Q. Okay. What does that distinction mean to
6 you?

7 A. Well, I've continued to serve my potato
8 farm clients.

9 Q. So have you -- in the last ten years have
10 you been putting yourself out there as a potential
11 expert in legal proceedings?

12 A. No.

13 Q. So when -- I take it you were approached
14 by UPL at some point to serve as an expert here?

15 A. I was approached by Rubin Anders, which I
16 guess is a firm that people hire to find experts.

17 Q. Okay. So your understanding is that UPL
18 or a representative from UPL reached out to Robin
19 Anders who in turned reached out to you; is that
20 your understanding?

21 A. Yes, that's my understanding.

22 Q. And when did Robin Anders reach out to

1 you?

2 **A. I think it's Rubin Anders.**

3 **My recollection is six to eight months**

4 **ago.**

5 Q. Okay. So that would be, what, June, July
6 2023?

7 **A. I believe so, yes.**

8 Q. So in the summer?

9 **A. That's just my recollection. I could look**
10 **back in my e-mails, but I don't have them available**
11 **to me.**

12 Q. Okay. So they reached out to you and then
13 how did you come to actually be retained?

14 **A. Rubin Anders asked me for -- did somewhat**
15 **of an interview and asked me for a CV. And then I**
16 **didn't hear back from them until about a week later**
17 **and they said that their client had decided to**
18 **retain me, and that's when the attorneys from**
19 **Finnegan first contacted me.**

20 Q. Okay. And when was that?

21 **A. Six months ago, in that ballpark.**

22 Q. Okay. So June, July 2023?

1 **A. My recollection is that, yes.**

2 Q. Okay. It wasn't before that?

3 **A. No.**

4 Q. Okay. Prior to being formally retained by
5 Finnegan had you seen any materials, documents
6 related to this case?

7 **A. No, I did not.**

8 Q. So is it fair to say that you agreed to
9 serve as an expert without having reviewed any
10 materials related to this case?

11 **A. That is correct.**

12 Q. Did you ask to review any materials
13 related to this case before agreeing to be
14 retained?

15 **A. I did not ask to see any materials, no. I**
16 **did ask what the case involved.**

17 Q. Okay.

18 **A. And orally that was communicated to me.**

19 Q. Okay. Was that a phone call?

20 **A. Yes, it would have been by phone call or**
21 **Zoom call. I can't remember.**

22 Q. How long did that call last?

1 **A. Less than five minutes.**

2 Q. Okay. So was that -- did they interview
3 you for the position?

4 **A. Finnegan did not interview me. The Rubin**
5 **Anders people did.**

6 Q. Okay. But the five-minute conversation
7 that you mentioned, that was a conversation with
8 Finnegan?

9 **A. With one of their attorneys that's no**
10 **longer associated with Finnegan, to the best of my**
11 **understanding.**

12 Q. And it was after that five-minute call
13 that you were formally retained?

14 **A. Then they sent me some materials to review**
15 **and then we continued on since that time.**

16 Q. But in terms of, you know, signing the
17 dotted line saying I'll serve as an expert, was
18 that before or after the five-minute call?

19 **A. I signed on the dotted line with Rubin**
20 **Anders, not with Finnegan. I bill Rubin Anders,**
21 **Rubin Anders bills Finnegan.**

22 Q. So when was that five-minute call with

1 Finnegan?

2 A. Within the last six months.

3 Q. Okay.

4 A. I mean, I don't -- I don't have my
5 calendar in front of me, I do not have my computer.
6 I could give you an exact time if I had that, but I
7 don't have it. And I don't have my phone with me
8 either.

9 Q. So after that call you were sent materials
10 related to this case?

11 A. That is correct.

12 Q. Do you recall what you were sent?

13 MR. FELDSTEIN: And I'm going to direct
14 you -- it's a yes-or-no question, Doctor. I'm
15 going to direct you to answer it that way in order
16 to avoid potentially revealing any attorney-client
17 communication or work product. Do you understand?
18 Do you need the question back?

19 MR. CARSON: The question is do you, yes
20 or no, recall what documents you were sent.

21 A. No. I'm answering that in that way
22 because the attorney told me not to reveal what was

1 **sent to me.**

2 Q. I'm just asking you if you remember what
3 was sent to you.

4 **A. I remember.**

5 Q. Okay.

6 MR. FELDSTEIN: My caution was not to
7 reveal what, if anything, was sent. That's why I
8 asked you to answer yes or no do you remember.

9 **A. So if the question is do I remember,**
10 **yes.**

11 Q. Okay. And did you rely on those documents
12 in preparing your declaration and opinions?

13 **A. Yes.**

14 Q. Okay. So what documents were those?

15 **A. Well, there was what we, quote, term the**
16 **'727 Patent.**

17 Q. Okay.

18 **A. I believe the documents have come over**
19 **time. I believe the Syngenta petition to review**
20 **the patent or whatever that petition is. And I**
21 **believe there were papers by Tobler, the Tobler**
22 **patent, De Oliveira patent, de Souza, the**

1 translation of the Godoy article, a set of APS
2 abstracts that had an abstract from Wigelsworth in
3 there. That's what I recall at this time.

4 Q. In May of last year UPL filed with the
5 Patent Office, the patent board a preliminary
6 response to Syngenta's petition. Were you provided
7 a copy of that?

8 A. I don't recall.

9 Q. Do you recall -- have you ever reviewed
10 the preliminary response that UPL submitted?

11 A. To the best of my knowledge, I didn't rely
12 on it for the declaration.

13 Q. I'm actually just asking if you've looked
14 at it.

15 A. I just said I didn't recall.

16 Q. Okay. Just to clarify, I wasn't -- I
17 wasn't ignoring your responses. I assumed that you
18 had testified that you didn't get it upfront, and
19 my question was whether you had ever read it since.

20 A. I don't recall.

21 Q. Okay.

22 Okay. I'd like to step back and ask you

1 some more questions about your background, but
2 before we do that just one preliminary matter that
3 I forgot to cover. Are you taking any medication
4 that would affect your testimony today?

5 **A. No, I am not.**

6 **Q.** And you mentioned your prior relationship
7 with Montana State University. What was that
8 relationship?

9 **A.** Well, it went over quite a long time. I
10 was initially hired there as a Dean of the college
11 of agriculture, director of the Ag Experiment
12 Station. Stepped out of that job and went into
13 being a senior professor with the research and
14 extension responsibilities. Then I took a -- very
15 quickly after I resigned the deanship I took an
16 assignment with the United States Department of
17 Agriculture to run their integrated pest management
18 initiative and did that for about two and a half
19 years. I was here in Washington, D.C. for about
20 80 percent of my time and I went back and forth.
21 Then when I went back on faculty I continued as a
22 professor, and then they asked me to run the

1 **Department of Research Centers and they asked me to**
2 **be the associate director of the Ag Experiment**
3 **Station and basically run the research operation**
4 **for scientists in the Ag Experiment Station. That**
5 **was my last job.**

6 Q. Okay. And when did that job end?

7 A. **I believe it was in 2019. I think that**
8 **was my last paycheck. It's listed in my CV.**

9 Q. Okay. So I see that you have some
10 documents there in front of you. What are those
11 documents?

12 A. **This is my declaration, this is a set of**
13 **Syngenta data that was submitted and given to me,**
14 **and this is the '727 Patent.**

15 Q. Okay. And just to make sure the record's
16 clear, the declaration you referred to is
17 Exhibit 2020?

18 A. **Yes.**

19 Q. And the data you mentioned are for
20 Exhibits 1031, 1032, and 1033; is that correct?

21 A. **That is correct.**

22 Q. Okay. And then I'm sorry. What's the

1 third document there? If you could provide the
2 exhibit number.

3 **A. This document is the UPL '727 Patent.**

4 Q. And that's Exhibit 1001, correct?

5 **A. That is correct.**

6 Q. And are those clean copies of those
7 documents?

8 **A. Yes, with one exception. There's two red
9 tabs in here, in the declaration.**

10 Q. Okay. And what are those red tabs?

11 **A. The red tabs are denoting typos in the
12 table.**

13 Q. Okay. Are those typos in Appendix B?

14 **A. One is in the declaration and the same
15 table is in Appendix B.**

16 Q. Okay. Well, I may ask you about those
17 tabs later today perhaps.

18 **A. Okay.**

19 Q. So Appendix A in Exhibit 2020 is your CV;
20 is that correct? If you could turn to that.

21 **A. Yes.**

22 Q. Okay. And looking at the first page there

1 of Appendix A, you've got some personal
2 information, education, employment experience,
3 correct?

4 **A. Yes.**

5 Q. Is all of that completely accurate?

6 **A. I believe so.**

7 Q. Okay. And can you describe for me the
8 circumstances surrounding your -- the end of your
9 professorship at Montana State University?

10 **A. I was 70 years old and it was time to**
11 **retire. My wife and I had -- it was just time to**
12 **retire.**

13 Q. Okay. I take it you weren't asked to
14 leave?

15 **A. Oh, no.**

16 Q. Have you ever been asked to leave any
17 position that you've had as reflected in the CV?

18 **A. No.**

19 Q. You've never been fired from a position?

20 **A. I've never been fired.**

21 Q. And your resume says that you're an
22 emeritus professor, July 1st, 2013 to present?

1 **A. That's correct.**

2 Q. You don't have any present
3 responsibilities as an emeritus professor?

4 **A. I don't have any present responsibilities,**
5 **no.**

6 Q. What is an emeritus professor?

7 **A. The title is bestowed by the university to**
8 **people that they want to honor with continuing**
9 **relationship and it gives you the right to use the**
10 **library, to use the Internet resources. If I was**
11 **on campus I would have an office. Probably would**
12 **be sharing with somebody. The right to use the**
13 **university facilities, but I don't reside in Bozman**
14 **anymore. So...**

15 Q. But if you did reside in Bozman, you would
16 have access to those amenities?

17 **A. That is correct.**

18 Q. Have you ever been sued before?

19 **A. Personally?**

20 Q. Yes.

21 **A. No.**

22 Q. Have you ever been named as a party in a

1 lawsuit?

2 **A. Yes.**

3 Q. Okay. What sort of suit was that?

4 **A. It was a traffic accident in Bozman,**
5 **Montana. I was never asked to do a deposition or**
6 **appear in court and the insurance company took care**
7 **of everything.**

8 Q. You've never been named as a party in a
9 lawsuit in conjunction with Montana State
10 University?

11 **A. Yes. It involved a termination of an**
12 **employee, and the employee was not happy.**

13 Q. Okay. Is there any reason why you didn't
14 mention that in answer to my first question?

15 **A. Because I just remembered it.**

16 Q. Okay. So can you just tell me what that
17 was about beyond the one-sentence description you
18 just gave?

19 MR. FELDSTEIN: I'll caution you, Doctor,
20 to the extent you have confidentiality obligations
21 to the university or other third parties, that I
22 don't believe counsel is asking you to violate

1 those.

2 **A. That would be a violation of**
3 **confidentiality to name the party involved and the**
4 **circumstances.**

5 Q. Are there any public documents relating to
6 the suit that you're aware of?

7 **A. The lawsuit was settled out of court.**
8 **That's all I can tell you.**

9 Q. Was a complaint filed?

10 **A. The employee filed a complaint, that is**
11 **correct.**

12 Q. So what was alleged in there?

13 MR. FELDSTEIN: Again, Doctor, if the
14 allegations are confidential and you have duties of
15 confidentiality, I don't believe counsel is asking
16 you to violate those.

17 **A. I can't discuss that. I've been told I**
18 **couldn't discuss it and I've not been released from**
19 **that.**

20 Q. Okay. Were you found at fault in any way?

21 MR. FELDSTEIN: Again, if any of that
22 information is confidential, Doctor, I don't

1 believe counsel is asking you to violate any
2 confidentiality.

3 **A. I can answer that there were no findings**
4 **in the case. The lawsuit was settled out of court.**

5 Q. Did the lawsuit affect in any way your
6 relationship with Montana State University?

7 **A. No, it did not.**

8 Q. What are you being paid for your work on
9 this case?

10 **A. I charge an hourly rate when I'm working**
11 **from home, and I charge a rate -- a different rate**
12 **when I travel and it's portal to portal. If you**
13 **need a specific number -- do you need a specific**
14 **number?**

15 Q. I'm asking you what your rate is, yes,
16 sir.

17 **A. For working at home I charge a hundred**
18 **dollars an hour with a half hour minimum.**

19 Q. Okay.

20 **A. And when I'm traveling I believe it's a**
21 **thousand dollars a day with a half-day minimum**
22 **charge.**

1 Q. So is that in addition to the hundred
2 dollars per hour?

3 A. **No.**

4 Q. You said portal to portal. What did you
5 mean by that?

6 A. **That's from the time I leave home until**
7 **the time I'm back at my home.**

8 Q. I see. Okay. And it's a thousand dollars
9 a day whether you work an hour or ten hours?

10 A. **That's correct.**

11 Q. Do you know how many hours you've worked
12 on this matter?

13 A. **I haven't totaled them all up. I bill**
14 **Rubin Anders on a monthly basis. So no, I don't**
15 **know the total number of hours.**

16 Q. You said you have not totaled them all
17 up?

18 A. **I have not totaled them all up.**

19 Q. Do you have a ballpark idea?

20 A. **75 to 80 hours, plus or minus five or ten**
21 **hours, and that does not include the time here in**
22 **Washington, D.C.**

1 Q. Okay. How many times have you been to
2 Washington, D.C.?

3 **A. This is the first time. Well, this is the**
4 **first time for this case.**

5 Q. That's what I mean. So in terms of your
6 thousand dollars per day while traveling, this is
7 the first trip you've taken in association with --

8 **A. That is correct.**

9 Q. -- with this case?

10 MR. FELDSTEIN: Let him finish the
11 question, Doctor.

12 Q. And that was my fault because I got a
13 little tongue tied and I couldn't quite get the end
14 of it out. So that was on me.

15 Okay. So 75 to 80 hours, give or take,
16 not including your trip here?

17 **A. That is correct.**

18 Q. How long have you been here in D.C. for
19 this -- to get ready for this deposition?

20 **A. I arrived Sunday night and I will leave**
21 **tomorrow morning.**

22 Q. Okay. The 75 to 80 hours, when did that

1 start, do you know?

2 **A. I started keeping track of my time from**
3 **the first contact with the Finnegan attorney.**

4 Q. Okay.

5 **A. That's my answer.**

6 Q. Your report -- your declaration I should
7 say, which you've got there in front of you, has a
8 signature and date on the first page, correct?

9 **A. That is correct.**

10 Q. And you signed this on November 8th, 2023?

11 **A. That is correct.**

12 Q. Do you recall when you first started
13 working on this declaration?

14 **A. My best guess would have been September,**
15 **October.**

16 Q. Okay.

17 **A. If I had my records in front of me I could**
18 **tell you definitively.**

19 Q. Yeah. Ballpark's fine.

20 Are you familiar with a document in this
21 proceeding called an institution decision from the
22 patent board?

1 **A. No, I am not.**

2 Q. Do you have a sense of how this sort of
3 proceeding plays out from beginning to end?

4 **A. Just a rough sense, yes.**

5 Q. Okay. Can you describe that for me?

6 **A. My understanding is that UPL filed a**
7 **patent -- I'm not going to give you any dates**
8 **because --**

9 Q. That's fine.

10 **A. And then Syngenta at some point protested**
11 **that patent.**

12 Q. And that's the petition you referenced
13 earlier?

14 **A. Well, I'm not quite certain of that.**

15 **And then UPL appealed and I think Syngenta**
16 **answered that appeal, and that may be the document**
17 **that I saw. And now we're in the process of that**
18 **appeal and the patent board is going to make some**
19 **sort of a decision.**

20 Q. Okay. You said that UPL responded to that
21 appeal. Did you review that document?

22 **A. No.**

1 Q. You did mention earlier that you reviewed
2 the petition early on in the case.

3 **A. The Syngenta petition, yes.**

4 Q. Did you review the declaration from
5 Dr. Brannen?

6 **A. Yes, I reviewed Dr. Brannen's petition --**
7 **or declaration, rather.**

8 Q. Do you know Dr. Brannen?

9 **A. Yes.**

10 Q. How do you know him?

11 **A. I recruited him as a Ph.D. student at**
12 **Auburn University. I was department head at the**
13 **time.**

14 Q. When was that?

15 **A. That would have been 1988, '89, '90,**
16 **somewhere in that range.**

17 Q. That's when you recruited him?

18 **A. Yes.**

19 Q. When were you affiliated with Auburn?

20 **A. I believe it was '88 to '92, something**
21 **like that.**

22 Q. Did you go to any football games?

1 **A. Pardon?**

2 Q. Did you go to any football games?

3 **A. Oh, yes.**

4 Q. Was that before or after Bo Jackson?

5 MR. FELDSTEIN: If you remember.

6 **A. I don't remember.**

7 Q. Yeah. I don't want you to speculate. I
8 actually graduated from Auburn in 1988. So that's
9 why I was interested in that.

10 **A. Oh, okay.**

11 Q. So you recruited him. Did you leave
12 Auburn before he got his Ph.D.?

13 **A. I don't recall. I was on his committee.**
14 **I don't recall with definity.**

15 Q. Okay. Do you consider Dr. Brannen to be a
16 reputable scientist in this field?

17 **A. Yes, I do.**

18 Q. And is he reputable in the field of
19 fungicides and plant pathology?

20 **A. Yes.**

21 Q. So you testified that you don't think
22 you've seen UPL's -- or you don't recall whether

1 you've seen UPL's preliminary response to the
2 Syngenta petition?

3 **A. That's my answer, yes.**

4 Q. Have you reviewed any documents that UPL
5 has submitted in this proceeding outside of your
6 declaration?

7 **A. I don't believe so.**

8 Q. So you were not involved in drafting UPL's
9 preliminary response, correct?

10 **A. I was not involved in drafting the**
11 **response, no.**

12 Q. Looking back at your declaration that you
13 signed on November 8th of 2023, did you draft this
14 declaration?

15 **A. This was drafted at my direction with**
16 **counsel.**

17 Q. Okay. So is it fair to say that you
18 didn't actually write the declaration?

19 **A. I wrote -- personally wrote large chunks**
20 **of it, yes.**

21 Q. Do you recall any particular chunks that
22 you wrote?

1 **A. Most of it.**

2 Q. Okay. Well, then, when I asked you if you
3 wrote it, you said it was written at your
4 direction. What did you mean by that?

5 **A. The data tables, the formatting, the**
6 **wording was at my -- all the wording was at my**
7 **direction and the data tables and where they put in**
8 **the exhibit stuff and all that, yes.**

9 Q. So all of that stuff was prepared by
10 Finnegan at your direction?

11 **A. That's correct.**

12 Q. Including the tables -- by "the tables"
13 you mean Appendix B?

14 **A. Appendix B and then the tables and charts**
15 **that are in the declaration itself.**

16 Q. Okay. Those were all prepared by
17 Finnegan?

18 **A. At my direction.**

19 Q. And who did you work with at Finnegan to
20 put together your declaration?

21 **A. It started with -- I'm going to have to**
22 **ask Mark. The first attorney I worked with, she's**

1 no longer with him. I don't recall the name.

2 Q. So you started with her?

3 A. That's correct. I'm trying to remember
4 her name.

5 Q. That's okay.

6 A. I'm having a senior moment. And then I
7 believe Mr. Guerra was continuous through
8 everything. After she left then Mr. Feldman was
9 added to the team.

10 Q. Was her name Max?

11 A. Max, but it's Maximilian. It was a
12 hyphenated name. It was a long name.

13 Q. Thank you.

14 So you cite a fair number of references in
15 the declaration; is that fair?

16 A. That is correct.

17 Q. Were you involved in looking -- finding
18 those references?

19 A. Yes.

20 MR. FELDSTEIN: You've got to let him
21 finish fully.

22 Q. Do you recall which references you went

1 out and found?

2 **A. If they're in my declaration, most, if not**
3 **all of them.**

4 Q. Okay. What about de Souza?

5 **A. Well, de Souza was provided to me. That**
6 **was one of the things that I told you was provided**
7 **to me by Finnegan.**

8 Q. Okay. Okay. We'll come back to that.

9 So did you prepare a list of the materials
10 that you considered in preparing your report?

11 **A. I believe in my declaration it discusses**
12 **what I relied on for my decisions.**

13 Q. Okay. So there's nothing that you relied
14 on that's not actually mentioned in the body of
15 your declaration?

16 **A. To the best of my knowledge.**

17 Q. And by "relied on" I meant read as part of
18 this case.

19 **A. I read a lot of literature, some of which**
20 **was not used in citations but it's not relied on --**
21 **if it's not annotated, it was not relied on for**
22 **this declaration.**

1 Q. Okay. So there are materials related to
2 this case that you read in forming your opinions
3 that are not actually -- don't actually appear in
4 your declaration; is that fair?

5 MR. FELDSTEIN: Objection, misstates
6 testimony.

7 A. Everything that is in the declaration is
8 what I relied on for my decision.

9 Q. Okay. And then there are other materials
10 that you read that are not included in your
11 declaration?

12 A. That's correct.

13 Q. And your declaration doesn't provide a
14 list of those materials, does it?

15 A. I don't believe it does.

16 Q. Do you recall any of those materials?

17 A. One set of materials that isn't in the
18 thing was the -- one set of materials was an
19 American Phytopathological Society Symposium on
20 examining -- the topic was looking at fungicide
21 synergy. There's two papers by Urst Gisi that I
22 felt and I still feel they address fungicide

1 synergism better than what's used in the
2 declaration.

3 Q. Okay. How do you spell Urst Gisi?

4 A. G-I-S-I.

5 THE REPORTER: What about the Urst?

6 THE WITNESS: U-R-S-T, I believe.

7 Q. So those documents you decided not to rely
8 on for your declaration?

9 A. I didn't have to use them for my
10 declaration.

11 Q. So you didn't rely on them?

12 A. No.

13 Q. Anything else you read but didn't note in
14 your declaration?

15 A. I read a lot of materials on fungicide
16 interaction. I looked at a lot of pesticide
17 labels. I think that would cover it.

18 Q. So you arrived Sunday night. Can you
19 describe for me what you did to prepare for this
20 deposition?

21 MR. FELDSTEIN: Doctor, I would just ask
22 you to be cautious to answer only generally, not

1 reveal any discussions you've had or specific
2 details about work we may have done together.

3 **A. In preparing for this deposition I reread**
4 **all of my declaration and the appendix materials,**
5 **double-checked data in the tables, I read -- reread**
6 **the '727 Patent, familiarized myself with the**
7 **Tobler patent, with the De Oliveira patent, the**
8 **de Souza materials, the Godoy '216 paper. I**
9 **believe that covers it. I may have left something**
10 **out, but not that I can recall.**

11 Q. And you've done all of that in the last
12 two days?

13 **A. Yes.**

14 Q. Did you meet with any Finnegan lawyers in
15 preparing for the deposition?

16 **A. The last two days I met with Mr. Feldman**
17 **and Mr. Guerra, yes.**

18 Q. How much time approximately did you spend
19 with them?

20 **A. Approximately two 8-hour days.**

21 Q. So you cite a number of documents in your
22 declaration. Have you read all of those?

1 **A. Yes, I have.**

2 Q. Apart from preparing for this deposition
3 over the last two days, have you done any work on
4 this case since signing your declaration on
5 November 8th, 2023?

6 **A. Other than reviewing materials and**
7 **rereading the Gisi papers, no.**

8 Q. Okay.

9 And then you mentioned some documents
10 you've read over the last couple of days. Any
11 other documents you reviewed in preparing for your
12 deposition?

13 **A. No.**

14 Q. That was an exhaustive list?

15 **A. To the best of my knowledge, yes.**

16 Q. In preparing for your deposition did you
17 review -- over the last two days did you review any
18 documents that are not cited in your declaration?

19 **A. No.**

20 Q. Have you reviewed Dr. Brannen's -- the
21 transcript of Dr. Brannen's deposition?

22 **A. Yes, I have.**

1 Q. You've read that document?

2 A. Yes, I have.

3 Q. In its entirety?

4 A. Yes, I have.

5 Q. If we could actually take a look at
6 Exhibit 1006.

7 A. And that is?

8 Q. I'll be passing a copy to you here in a
9 moment.

10 A. Oh, okay. All right.

11 Q. So this has previously been marked as
12 Exhibit 1006. Do you recognize this?

13 A. Yes. This is the Tobler patent.

14 Q. Okay. And have you read this?

15 A. Many times.

16 Q. Okay. If we could turn to column 28.
17 Just let me know when you're there.

18 A. I'm here.

19 THE REPORTER: If we're going to be on
20 this document for a while, do you mind if we take a
21 quick bathroom break?

22 MR. CARSON: No, not at all.

1 (A break was had.)

2 BY MR. CARSON:

3 Q. So, Dr. Jacobsen, we were about to take a
4 look at Exhibit 1006, the Tobler reference. You've
5 got that there in front of you. And I believe I
6 had directed you to column 28 and it looks like
7 you're there; is that correct?

8 A. Yes, I'm there.

9 Q. Okay. Great. Sorry. One moment.

10 Okay. So column 28 and I could direct
11 your attention to I guess it's line 6 to 9.

12 A. 69?

13 Q. No. 6 to 9, starting at line 6 at the
14 top.

15 A. Line 6 to 9. Okay.

16 Q. Yeah. And I'll just read this. It says
17 "Further examples for compositions according to the
18 present invention which comprise three active
19 ingredients are defined as embodiments E1 and E2";
20 do you see that?

21 A. Yes.

22 Q. I read that correctly?

1 **A. Yes.**

2 Q. Okay.

3 So do you agree that the invention
4 disclosed in Tobler includes compositions that
5 comprise three active ingredients?

6 **A. Yes, in a generic way. There's no**
7 **specific guidance to an exact three.**

8 Q. I understand that's your opinion. I
9 wasn't asking you about that. I'm just asking you
10 generally as reflected in the lines that I just
11 read, do you agree that the invention disclosed in
12 Tobler includes compositions that comprise three
13 active ingredients?

14 **A. I've answered the question.**

15 Q. And the answer was?

16 **A. Yes, but it doesn't -- they're generic.**
17 **They're not specific. There's no specific guidance**
18 **to which three.**

19 Q. But the compositions disclosed comprise
20 three active ingredients?

21 **A. I've answered the question.**

22 Q. Well, I just asked another question.

1 **A. Okay.**

2 MR. FELDSTEIN: Object to form, vague.

3 **A. And what is your question?**

4 Q. I'm not asking you about specific --

5 **A. Okay.**

6 Q. -- specific combinations. I'm just asking
7 you whether the combinations disclosed include
8 combinations that comprise three active
9 ingredients.

10 MR. FELDSTEIN: Objection, asked and
11 answered.

12 **A. If we go to just three ingredients, the**
13 **global genus described here is more than 300,000**
14 **potential combinations. So there's not specific**
15 **guidance to what three.**

16 Q. I understand that. I actually didn't ask
17 you that question.

18 **A. Well, that's my answer.**

19 Q. Well, but see, you need to answer the
20 question asked. That's not the question I asked
21 you. And I -- you know, I appreciate that that's
22 your opinion and actually I'm not challenging that

1 right now. I haven't even gone there yet. I'm
2 just simply asking you whether the combinations --
3 you describe it as a genus, but those that are
4 disclosed in Tobler include at least some that are
5 three active ingredients, correct?

6 MR. FELDSTEIN: Object to form.

7 A. I will agree that further examples for
8 compositions according to the present invention
9 comprise three active ingredients and are defined
10 in embodiments E1 and E2. I will agree to that.

11 Q. Okay.

12 So if we just focus on embodiment E1,
13 that's discussed in Tobler at lines 10 to 57; is
14 that correct?

15 A. Yes.

16 Q. Okay. And that list of embodiments E1,
17 that list includes mancozeb plus what's referred to
18 as TX1, correct?

19 A. That's in the list, yes.

20 Q. And that's in the list at line 40 of
21 column 28, correct?

22 A. That is correct.

1 Q. And you agree that Tobler also tells us
2 that TX1 means the compound A-1.1 plus a compound
3 selected from group P, correct?

4 A. That's correct.

5 Q. And that's at lines 10 and 11 of
6 column 28; is that right?

7 A. That is correct.

8 Q. So is it fair to say, then, at least one
9 of the three active ingredient compounds provided
10 in Tobler is mancozeb plus compound A-1.1 plus a
11 compound selected from group P?

12 MR. FELDSTEIN: Object to form.

13 A. Repeat your question, please.

14 Q. Well, you testified earlier that the --
15 one of the examples listed of embodiment E1 is
16 mancozeb plus TX1.

17 A. Yes.

18 Q. And then we discussed what TX1 means
19 according to Tobler, correct?

20 A. Yes.

21 Q. So putting those together, you would agree
22 that an example of embodiment E1 listed in Tobler

1 would be mancozeb plus compound A-1.1 plus a
2 compound selected from group P; is that fair?

3 **A. That specific example, yes.**

4 Q. Now, focusing on compound A-1.1 as it's
5 referenced in Tobler, you understand that that
6 compound is benzovindiflupyr, correct?

7 **A. Yes.**

8 Q. Okay. And I take it by your reaction that
9 I probably mispronounced that word; is that
10 correct?

11 **A. I've heard many pronunciations for that.**

12 Q. Okay.

13 **A. If it would be reasonable, why don't we**
14 **just call it benzo.**

15 Q. Okay.

16 MR. FELDSTEIN: The thing is also, Doctor,
17 no matter how anyone pronounces it, it's going to
18 be recorded the same way. So it's the magic of the
19 deposition that no matter what either of you say,
20 it still gets written down with the same letters.

21 THE WITNESS: Okay.

22 Q. Just for my own benefit, though, how would

1 you pronounce benzovindiflupyr?

2 **A. Benzovindiflupyr. Benzovindiflupyr.**

3 Q. Okay. And that's spelled

4 B-E-N-Z-O-V-I-N-D-I-F-L-U-P-Y-R?

5 **A. I believe that's correct.**

6 Q. All right. And today we're just going to
7 call that benzo, right?

8 **A. It would be helpful I think to the
9 discussion.**

10 Q. It's going to help me as well. So I
11 appreciate that suggestion.

12 And then I'd like to ask you a question
13 about group P. Tobler provides a list of the
14 members of what it defines as group P, correct?

15 **A. That is correct.**

16 Q. And where is the group P list provided in
17 Tobler, do you know?

18 **A. I believe the first place that it's
19 mentioned is in column 22, and I believe it
20 continues on in columns 23 and 24.**

21 Q. Okay. So just to clarify, Tobler's
22 listing of the group P members starts at column 22,

1 line 60; is that correct?

2 A. Or 61, whichever -- however you read it.

3 60 looks like it's a blank.

4 Q. Okay.

5 A. But it's right below that.

6 Q. All right. It's the line that starts

7 "Group P," colon, correct?

8 A. That's correct.

9 Q. Okay. And then where does the list of
10 group P members end in Tobler?

11 A. I believe at the bottom of column 24. Or,
12 actually, bottom of 25.

13 Q. Okay. So the list runs through column 25,
14 line 67; is that correct?

15 A. Yes.

16 Q. Okay. And this group P list as disclosed
17 by Tobler includes, for example, azoxystrobin; is
18 that correct?

19 A. Could you point out to me where it is?

20 Q. I'm looking at column 22, line 63.

21 A. Yes.

22 Q. Okay. And just to clarify the question

1 and answer, the group P list as disclosed in Tobler
2 includes azoxystrobin, correct?

3 **A. Yes.**

4 Q. All right. And that's listed at
5 column 22, line 63?

6 **A. Yes.**

7 Q. And the group P list disclosed in Tobler
8 also includes cyproconazole?

9 **A. Cyproconazole. Would you point out to me**
10 **where that is?**

11 Q. Column 23, line 14.

12 **A. Yes.**

13 Q. So cyproconazole is one of the members of
14 the group P list in Tobler?

15 **A. That is correct.**

16 Q. As well as azoxystrobin?

17 **A. Yes.**

18 Q. And the group P list also -- I'm looking
19 at the bottom of column 22 -- the group P list also
20 includes picoxystrobin?

21 **A. I believe in line 66, yes, picoxystrobin.**

22 Q. You're looking at line -- is it 66 or

1 65?

2 A. 65, yes.

3 Q. Line 65 of column 2?

4 A. Yes. That's my answer.

5 Q. Have you ever studied library science?

6 A. No.

7 Q. Never taken a course in it?

8 A. No.

9 Q. Taught a course in it?

10 A. Nope.

11 Q. Supervised a grad student in that area?

12 A. In library science, no.

13 Q. And you don't list any experience in your
14 CV that relates to library science, correct?

15 A. No.

16 Q. Have you ever indexed or cataloged a
17 publication for a library?

18 A. No.

19 Q. Do you have any experience utilizing MARC
20 standards?

21 A. No.

22 Q. Do you know what MARC stands for?

1 **A. I have no knowledge.**

2 Q. So if I told you it stood for
3 measure-readable cataloging, you wouldn't know one
4 way or the other?

5 **A. That would make sense to me, yes.**

6 Q. But you don't know for sure that's what it
7 stands for?

8 **A. No, I do not.**

9 Q. And you don't consider yourself an expert
10 in indexing or cataloging references for
11 publication, correct?

12 **A. No, I do not.**

13 Q. Have you ever held yourself out as an
14 expert in that area?

15 **A. Never.**

16 Q. Would you consider yourself competent to
17 render opinions in that area?

18 **A. No.**

19 Q. Are you familiar with the Brazilian
20 Agricultural Research Corp?

21 **A. Yes.**

22 Q. What is that?

1 **A. EMBRA. The agency EMBRA, yes.**

2 **Q. Okay. How do you spell that?**

3 **A. E-M-B-R-A I believe it is. Or EMPRA,**
4 **E-M-P-R-A.**

5 **Q. Is it EMBRA or EMBRAPA?**

6 **A. EMBRAPA I believe. I would have to look**
7 **at it, but --**

8 **Q. Yes. Okay. But you are familiar with --**

9 **A. Yes.**

10 **Q. When I say EMBRA- --**

11 THE REPORTER: Guys, we've got to slow
12 down.

13 **Q. So I'll go first if that's okay.**

14 **A. Yes.**

15 **Q. So when I was saying EMBRAPA, I'm spelling**
16 **that E-M-B, as in boy, R-A-P, as in Paul, A,**
17 **EMBRAPA. And the question is are you familiar with**
18 **EMBRAPA?**

19 **A. Yes.**

20 **Q. Okay. What is EMBRAPA?**

21 **A. It would be analogous to our USDA.**

22 **Q. Okay.**

1 **A. It's the Brazilian research and extension**
2 **organization in agriculture.**

3 Q. Okay. So EMBRAPA is in Brazil?

4 **A. That's correct.**

5 Q. Okay. And its sort of role in Brazil is
6 analogous to the USDA in the United States; is that
7 correct?

8 **A. That's correct.**

9 Q. How are you familiar with EMBRAPA?

10 **A. When I was at the University of Illinois**
11 **as a professor and dealt with soybean diseases**
12 **extensively, I kept track of kind of what they did**
13 **down there and there were several of our graduate**
14 **students that ended up working for that**
15 **organization when they graduated.**

16 Q. Okay. About when was the time frame that
17 you were doing soybean disease studies at the
18 University of Illinois?

19 **A. I started in 1973 through I believe '87,**
20 **'88, something like that. It's in my CV.**

21 Q. Can we look at that? It's Exhibit 2020,
22 attachment A, and can you show me where it

1 references the work that you just described?

2 **A. October 1, 1973, assistant professor,**
3 **University of Illinois, plant pathology and from**
4 **August 21 of 1987 I had gone from being an**
5 **assistant professor, associate professor, and**
6 **professor of plant pathology.**

7 Q. Also at the University of Illinois?

8 **A. No. August 21 -- it says August 21, 1993,**
9 **to August 21, 1997, that's when I was at the rank**
10 **of professor, I was the extension project leader**
11 **and director of the plant clinic.**

12 Q. At the University of Illinois?

13 **A. At the University of Illinois. That would**
14 **be Urbana-Champaign.**

15 Q. Okay. And you were doing some work
16 related to soybean diseases at the time?

17 **A. I did a lot of work on soybean pathology.**

18 Q. What sort of pathologies?

19 **A. Seed pathology -- well, control of soybean**
20 **diseases.**

21 Q. Does that include soybean rust?

22 **A. No.**

1 Q. Is that not a soybean disease?

2 A. That is a soybean disease. It didn't
3 occur at that time in Illinois.

4 Q. Okay. So what was the relationship
5 between your soybean-disease work that you were
6 doing and EMBRAPA, if any?

7 A. Well, at that time Brazil was becoming a
8 major producer of soybeans. You know, as a
9 scientist you keep track of what other people do.
10 Then I also had a couple of cases dealing with
11 cargo shipments that originated in Brazil and went
12 to Japan that there was deterioration of the cargo,
13 and I was retained to identify why that happened
14 and who was responsible.

15 Q. Is -- you mentioned that Brazil was
16 becoming a major producer of soybeans. Is Brazil
17 today a major producer of soybeans?

18 A. I believe they are the major producer of
19 soybeans.

20 Q. And so based on your testimony, is it fair
21 to say that a scientist interested in soybean
22 diseases would be keeping track of what's going on

1 in Brazil?

2 A. That's correct.

3 Q. And would be keeping track of what's going
4 on with respect to EMBRAPA as well, correct?

5 A. Yes.

6 Q. And that would have been the case --
7 strike that.

8 "Keeping track" was your phrase. What do
9 you mean by that?

10 A. You know, you constantly want to be
11 reading the literature. You know, when you're
12 publishing papers or circulars you've got to give
13 the right citations for things, getting new
14 research ideas. If you're going to be writing
15 grants you might cite specific papers or specific
16 work. The whole thing from conceiving ideas for
17 research all the way through writing and
18 reporting.

19 Q. So you meant keeping track of
20 publications?

21 A. That's correct.

22 Q. Does EMBRAPA publish papers?

1 **A. Yes.**

2 Q. And that's the sort of literature that you
3 were keeping track of when you were studying
4 soybean diseases?

5 **A. Yes.**

6 Q. And that's the sort of literature that any
7 scientist studying soybean diseases would also keep
8 track of?

9 **A. Any good scientist, yes.**

10 Q. Including in 2016?

11 **A. At any time.**

12 Q. Have you ever published anything through
13 EMBRAPA?

14 **A. No.**

15 Q. Apart from reading the publications of
16 EMBRAPA, are you -- do you have any familiarity
17 with EMBRAPA's procedures for making reports
18 available to the public?

19 **A. Not specifically, no.**

20 Q. What do you mean by "not specifically"?

21 **A. They have -- they have a Website, they**
22 **produce hard-copy publications both of a technical**

1 **nature and more of reading for their own farmers.**

2 **So I think that covers it.**

3 Q. So that's the extent of your knowledge of
4 their -- how they make reports available to the
5 public?

6 A. I'm assuming today -- they didn't then,
7 but I assume they have podcasts and all kind of
8 things now. They probably have radio programs.

9 Q. And all of that, a good scientist near
10 soybean disease would be keeping track of,
11 correct?

12 A. Not the radio programs, but at my time
13 good scientists would be keeping track of the
14 written published work.

15 Q. But beyond that, you don't have any
16 knowledge of their sort of procedures for pushing
17 papers out to the public, do you?

18 A. Specific procedures, no.

19 Q. And you've never had any such familiarity,
20 correct?

21 A. No.

22 Q. Let's mark -- actually, let's take a look

1 at what has previously been marked in this
2 proceeding as Exhibit 1022.

3 And I only have one copy of this. I
4 assume you have access to it?

5 MR. FELDSTEIN: What is the document?

6 MR. CARSON: This is the supplemental
7 declaration of Sylvia Hall-Ellis.

8 MR. FELDSTEIN: I actually don't have a
9 copy of this. Do you have an electronic copy you
10 could use and give me the hard copy?

11 MR. CARSON: Yes.

12 Have you ever seen this document before?

13 **A. Yes, I have.**

14 Q. When did you see it?

15 **A. It was provided to me by the Finnegan**
16 **attorneys. I didn't remember it from before, but**
17 **yes, I have seen it.**

18 Q. Okay. And you've reviewed it?

19 **A. Yes.**

20 Q. Did you discuss that document in your
21 declaration?

22 **A. If I did, it would be in relation to the**

1 **Godoy --**

2 Q. Are you looking for page 28 by chance?

3 **A. That's where I'm going.**

4 **Yes, I'm at page 28.**

5 Q. Okay. So you were going there I think to
6 answer my questions whether or not you relied on
7 Exhibit 1022 in your declaration? So that's a
8 pending question.

9 **A. The declaration -- what I saw and so**
10 **annotated is Exhibit 1019.**

11 Q. And that would be the Hall-Ellis
12 declaration as noted in your declaration?

13 **A. Yes.**

14 Q. Okay. The document that I put in front of
15 you as Exhibit 1022, which is the supplemental
16 Hall-Ellis declaration.

17 **A. I've not seen that.**

18 Q. You've not seen it before?

19 **A. I have not seen that.**

20 Q. If you kind of thumb through to the end,
21 there's a series of attachments. So I take it
22 you've not seen any of this document, the

1 declaration or the attachments; is that fair?

2 **A. I have not reviewed Exhibit 1022, no. I**
3 **have not seen it.**

4 Q. Any of it?

5 **A. I don't know if there's any overlap from**
6 **1019 to this.**

7 Q. Okay. If you could go to attachment 3.

8 **A. Where is that? I have here attachment 8.**
9 **I see attachment 3.**

10 Q. You found it. Good. I was afraid I was
11 going to have to direct you to it.

12 So let's look at attachment 3. Have you
13 seen that document before?

14 **A. I believe I've seen this page, yes.**

15 Q. Okay. Do you know what attachment 3 is?

16 **A. No, not specifically.**

17 Q. So you don't know if there's a sort of
18 technical name for this particular attachment?

19 **A. No, I do not.**

20 Q. Toward the top is a reference to a
21 "Current date" and then below that a "Date of last
22 update"; do you see that?

1 **A. Yes.**

2 Q. Do you know what those dates mean?

3 **A. They read 09/01/216 for current date.**

4 **Date of last update reads 09/22/216 -- 2016, rather**

5 MR. FELDSTEIN: Sorry. I just want to
6 quickly interpose an objection to Exhibit 1022.

7 Q. But those phrases, "Current date" and
8 "Date of last update," do you know what that means
9 in the context of this document?

10 **A. No, I do not.**

11 Q. And further down in bold do you see the
12 word "MARC"?

13 **A. Further down where? I do not see it.**

14 Q. Okay. Let's start at the top. Do you see
15 "Library (S)"?

16 **A. Yes.**

17 Q. Okay. And that's bolded, right?

18 **A. Yes.**

19 Q. And there's a series of bolded headings
20 below that, correct?

21 **A. Okay. I have found your -- I have found**
22 **"MARC," colon.**

1 Q. Okay. Great. Thank you.

2 And next to "MARC," colon, are a series of
3 entries; do you see that?

4 A. Yes.

5 Q. Do you know what those are?

6 A. I don't know for certain what they are.

7 Q. Okay. So you would just be guessing?

8 A. Yes.

9 Q. And the numerical fields that you see on
10 the left, the 001, 005, for example, do you see
11 those?

12 A. Yes.

13 Q. Do you know what those numerical fields
14 refer to?

15 A. No, I do not.

16 Q. Are you familiar with Dublin Core
17 indexing?

18 A. No.

19 Q. So you don't know what it's used for,
20 fair?

21 A. No.

22 Q. If we go to attachment 6.

1 **A. Yes.**

2 Q. Are you there?

3 **A. Yes.**

4 Q. Okay. Do you recognize this as a Dublin
5 Core record?

6 **A. I don't know what a Dublin Core record**
7 **is.**

8 Q. Okay. Well, just looking at this
9 document, do you have any idea what it shows?

10 **A. It gives a Website and then it gives a**
11 **secure Website and it ends up referencing a**
12 **document 1052207. It lists what I believe are**
13 **authorship.**

14 Q. Have you ever seen a document like this
15 before?

16 **A. No.**

17 Q. If you go to the next page of the
18 document, on the left do you see an entry that says
19 "DC.date.available"?

20 **A. DC.date -- I see a "DC.date.updated."**

21 Q. Okay. So on this page the first entry at
22 the top is "DC.contributor.author," correct?

1 **A. That's correct.**

2 Q. Okay. And if you just kind of go down
3 from there, you're going to hit
4 "DC.date.available"; do you see that?

5 **A. "DC.date.available." Okay.**

6 Q. Do you know what that field refers to?

7 **A. Not specifically, but it would appear**
8 **2016-09-22 would be September 20 -- I would**
9 **interpret it as September 22nd of 2016.**

10 Q. And what's the significance of that date,
11 if you know?

12 **A. It's associated with a thing that says**
13 **"DC.date.available."**

14 Q. But you don't know what that association
15 means exactly, do you?

16 **A. No.**

17 Q. What about right below that,
18 "DC.date.created"; do you see that?

19 **A. Yes, I see that.**

20 Q. Okay. Do you know what "DC.date.created"
21 in the context of this document means?

22 **A. No, I do not.**

1 Q. Are you familiar with ResearchGate?

2 A. Yes.

3 Q. What is it?

4 A. It's basically a service where you can
5 start to search for publications using keywords and
6 things like that, authors.

7 Q. Is this an on-line service?

8 A. I believe so, yes. At least when I've
9 used it it has been.

10 Q. So you have used it before?

11 A. Yes.

12 Q. When's the last time you used it?

13 A. 2013 to '17, somewhere in that range.

14 Q. Okay. And what were the circumstances
15 surrounding your use of it?

16 A. When I was working on a patent for
17 bacillus mycoides isolate J.

18 Q. Okay. And what prompted you to go to
19 ResearchGate?

20 A. Because I wanted to be able to check
21 certain references and check and see if there was
22 literature about certain topics. I can't remember

1 **specifically what I looked for, but that's the last**
2 **time I used a search engine to review literature.**

3 Q. Did you ever use ResearchGate to review
4 literature as a part of your -- as a professor?

5 A. **Yes. I've so testified.**

6 Q. Okay. That's the circumstance you've just
7 been describing?

8 A. **Through my entire professorial career I**
9 **used search engines as soon as they became**
10 **available, ResearchGate being one of them.**

11 Q. Have you ever uploaded something to
12 ResearchGate?

13 A. **Personally, no.**

14 Q. Do you know anyone who has?

15 A. **I can't say I can personally -- I would**
16 **say no.**

17 Q. Okay.

18 So if we go back to your report, we were
19 looking at page 28, and you did rely on the
20 Hall-Ellis declaration, Exhibit 1019, for your
21 report, correct?

22 A. **That's what my declaration states.**

1 Q. Okay. For what purpose did you rely on
2 that?

3 A. **This related to the Godoy publication, at**
4 **what point was Godoy available to the public.**

5 Q. Okay. And you relied on information
6 contained in that declaration?

7 A. **That is correct.**

8 Q. Do you believe it would have been useful
9 in rendering your opinions to also have seen the
10 information in the supplemental declaration of
11 Hall-Ellis?

12 A. **It may have been. I haven't reviewed the**
13 **information in Exhibit 1022.**

14 Q. Well, having looked at it today, is that
15 something you'd want to consider in rendering an
16 opinion about the public availability of Godoy?

17 A. **I don't know because I don't know what's**
18 **in there.**

19 Q. Well, we looked at a couple of
20 attachments.

21 A. **And I didn't understand what I was looking**
22 **at.**

1 Q. Okay. But you did understand what you
2 were looking at in the Hall-Ellis declaration?

3 A. Yes.

4 Q. All of it?

5 A. To the best of my ability, yes.

6 Q. So is it fair to say you were never
7 informed to the existence of this supplemental
8 declaration of Hall-Ellis?

9 A. To the best of my knowledge, I've never
10 seen it or been aware of it.

11 Q. Okay. Let's look at another document.
12 This was previously marked as Exhibit 1007.

13 A. You said this was your only copy?

14 Q. You can hold on to that.

15 Do you recognize that document?

16 A. This is De Oliveira. I believe that I do.
17 I believe that I've seen this.

18 Q. Well, this is one of the prior art
19 references that's being served in this proceeding,
20 correct?

21 A. Uh-huh.

22 THE REPORTER: Yes?

1 THE WITNESS: Yes.

2 Q. Okay. And you have a section in your
3 report devoted to that reference, correct?

4 A. Yes.

5 Q. If we look at the table of contents of
6 your declaration, it looks like you have a
7 discussion of Oliveira that starts on page 73; is
8 that right?

9 A. Yes.

10 Q. Okay.

11 Actually, if we could go back briefly to
12 Godoy. Your view is that -- in your opinion you've
13 not seen any evidence in this proceeding that
14 supports an August 2016 publication date for Godoy;
15 is that right?

16 A. What I have seen is from the EMBRA [sic]
17 Website copies of it that was available in 2016.
18 That's what I have seen.

19 Q. So you haven't -- and based on that, your
20 view is that there's no evidence in this case to
21 support an August 2016 publication; is that fair?

22 A. My belief is there's no evidence that it

1 **was searchable in the literature by November 4 of**
2 **2016.**

3 Q. Okay. Okay.

4 If we go back to, sorry, the Oliveira
5 reference, Exhibit 1007, you understand this is a
6 UPL patent application, right, sir?

7 A. **That's my understanding, yes.**

8 Q. And the listed inventors there are
9 affiliated with UPL?

10 MR. FELDSTEIN: Objection, foundation.

11 A. Well, under inventors it says "United
12 Phosphorous do Brazil Limited, United Phosphorous
13 House (indecipherable), Mumbai, Uniphos House
14 Maharashtra, Mumbai." So those are the listed
15 inventors. So I don't see UPL.

16 Q. What does UPL stand for?

17 A. **I believe United Phosphorous Limited or**
18 **something like that.**

19 Q. So you don't have any reason to doubt that
20 these inventors are affiliated with UPL, do you?

21 MR. FELDSTEIN: Objection, foundation.

22 A. **I don't know.**

1 Q. And two of the inventors on the Oliveira
2 patent application, Exhibit 1007, also appear on
3 the '727 Patent; is that correct? That's
4 Exhibit 1001.

5 A. I see Mr. Shroff, S-H-R-O-F-F,
6 Mr. Rajnikant, R-A-J-N-I-K-A-N-T, and then a Vikram
7 R-A-J-N-I-K-A-N-T on the De Oliveira, and I don't
8 know if it's the same thing as Vikram Rajnikant
9 Shroff, Dubai that's listed in the '727 Patent,
10 Exhibit 1001. So there does appear to be overlap,
11 yes.

12 Q. Okay. Let's take a look at what's
13 previously been marked as Exhibit 1021. And feel
14 free to thumb through it if you need to. My
15 question is whether you recognize this document.

16 A. Right offhand I do not recognize it.

17 Q. Okay. You see that it is a declaration,
18 right?

19 A. On page 3 it says "Declaration pursuant to
20 37 CFR" and then some sort of a squiggle and
21 "1-132." So the word "declaration" is there.

22 Q. Okay. And it is signed by a Dr. Oliveira

1 if you look at the last page, correct?

2 MR. FELDSTEIN: Objection, foundation.

3 A. I cannot decipher De Oliveira from the
4 written signature, but the print name says "Gilson
5 Aparecido Herman Gildo De Oliveira," dated 17 June
6 2019.

7 Q. Okay. So this is a document that was
8 produced in this proceeding, and I'll represent to
9 you that it was submitted by UPL to the U.S. Patent
10 Office in support of a U.S. application that claims
11 priority to the Oliveira application at issue in
12 this case, Exhibit 1007.

13 A. Okay.

14 Q. Signed by the inventor, Dr. Oliveira. You
15 don't believe you've reviewed this document?

16 A. This precise document, I don't believe so.

17 Q. If you could go to paragraph 13 of the
18 document.

19 A. Paragraph 13. And that occurs on page 6?

20 Q. Yes, sir.

21 A. Okay, yes. I see that.

22 Q. And there's a -- there's -- paragraph 13

1 is a reference to Dr. Claudia Vieira Godoy?

2 **A. Yes.**

3 Q. Do you know Dr. Claudia Godoy?

4 **A. Personally, I do not.**

5 Q. Have you heard of her?

6 **A. Yes.**

7 Q. Where have you heard of her?

8 **A. In relation to this case and I may have**
9 **seen her name in my readings. I don't remember**
10 **ever specifically citing her.**

11 Q. But prior to your work on this case you
12 may have seen her name from her publications?

13 **A. I think so, yes.**

14 Q. Okay. Dr. Oliveira refers to her as a
15 "Renowned and highly published scientist in the
16 field of fungicidal combinations"; do you see that?

17 **A. Yes.**

18 Q. Do you have any reason to disagree with
19 Dr. Oliveira's assessment of Dr. Godoy?

20 **A. No.**

21 Q. If you go to paragraph 38.

22 **A. That's on page 14?**

1 Q. Yes, sir.

2 A. Okay.

3 Q. There's a description here of a Godoy
4 publication; is that fair? And take the time to
5 read that paragraph if you need to.

6 (Witness reviewing document.)

7 A. I see that.

8 Q. And do you recognize that as the Godoy
9 publication that's at issue in this case?

10 A. I would have to check precisely for the
11 wording because this is in Portuguese.

12 Q. Okay. Well, let's look at what's
13 previously been marked as Exhibit 1004. Do you
14 recognize this?

15 A. Yes.

16 Q. And let's -- actually, I'll give you also
17 the Exhibit 1005. I don't think we've introduced
18 that today.

19 A. This is the translation I believe, yes.

20 Q. Okay. So then my question -- you've sort
21 of partially answered this in advance. My question
22 is whether you recognize Exhibits 1004 and 1005?

1 **A. Yes.**

2 Q. And what are they?

3 **A. This is a circular -- a printout from the**
4 **Website from EMBRAPA of Dr. Godoy's paper studying**
5 **the "Efficiency of multisite fungicides in**
6 **controlling Asian" --**

7 THE REPORTER: multisite --

8 **A. -- "multisite fungicides in controlling**
9 **Asian Soybean rust, phakopsora pachyrhizi."**
10 **Phakopsora is spelled P-H-A-K-O-P-S-O-R-A;**
11 **pachyrhizi is spelled P-A-C-H-Y-R-H-I-Z-I.**

12 Q. Dr. Jacobsen, you don't need to read
13 all -- I wasn't asking to read all the inventors.
14 It's going to take a while.

15 **A. Okay.**

16 Q. So if you don't mind -- I mean of the
17 authors. If you don't mind, I'll just cut you off
18 there. Is that okay?

19 **A. That's fine. I was simply for the court**
20 **reporter spelling out the scientific names.**

21 THE REPORTER: Thank you.

22 Q. I appreciate that. I thought you were

1 actually spelling the names of each of what's like
2 12 authors of the publication. Sorry.

3 So you recognize this as the Godoy
4 publication that's at issue in this case as prior
5 art, correct?

6 A. Yes.

7 Q. And Exhibit 1004 is the Portuguese
8 language version of that document?

9 A. That is correct.

10 Q. And Exhibit 1005 is the English
11 translation of that document, correct?

12 A. Yes.

13 Q. So if we go back to Exhibit 1021, which we
14 were looking at a moment ago. I believe it's on
15 your left underneath the Godoy references.

16 A. Yes. Okay. 1021, yes.

17 Q. Yes. And we were looking at paragraph 38
18 of that document.

19 A. Yes.

20 Q. And my question was whether you recognized
21 the article that's cited there as the Portuguese
22 language version of the Godoy reference at issue in

1 this proceeding.

2 **A. They are the same title.**

3 Q. Okay. So you don't have any reason to
4 doubt that the declaration's referring to
5 Exhibit 1004, correct?

6 **A. It would appear to, yes.**

7 Q. Do you -- and you've read paragraph 38 in
8 Exhibit 1021?

9 **A. I just did, yes.**

10 Q. Okay. Do you agree with the UPL
11 inventor's characterization of the Godoy reference
12 as provided in paragraph 38?

13 **A. I'm going to take the time to read it**
14 **carefully.**

15 Q. Please do.

16 (Witness reviewing document.)

17 **A. I have not extensively reviewed all of the**
18 **literature in this time period relating to soybean**
19 **rust, but I fundamentally agree with what's in**
20 **paragraph 38.**

21 Q. Thank you.

22 Let's look at another document and we're

1 going to mark this one Exhibit 1038.

2 THE REPORTER: I need to mark it?

3 MR. CARSON: It's marked already. Sorry.

4 (Syngenta Exhibit 1038 was
5 marked for identification.)

6 BY MR. CARSON:

7 Q. And this is a hefty document, but I'll
8 give it to you. It's bound in two parts, but it's
9 one document that's been marked as Exhibit 1038.

10 MR. FELDSTEIN: I'm going to object to
11 Exhibit 1038.

12 MR. CARSON: Okay.

13 BY MR. CARSON:

14 Q. Dr. Jacobsen, have you -- please take the
15 rubber band off, feel free to look through it. The
16 question is whether you've seen this before.

17 **A. I do not believe I have seen this before.**

18 Q. Okay. So I will represent to you that
19 this document, Exhibit 1038, was submitted by UPL
20 to the Patent Office in India to support a patent
21 application in India that claims priority to the
22 Oliveira application that's at issue in this case,

1 Exhibit 1007, which we've been looking at. Do you
2 follow me?

3 **A. I'm following.**

4 Q. Okay. And if we turn to page -- and we're
5 going to focus mainly on sort of the first half of
6 this exhibit which you've got there on the top. If
7 we turn to page 49 of 728, do you see those --

8 **A. Yes.**

9 Q. -- notations at the bottom? Okay.

10 THE REPORTER: Let him finish.

11 MR. CARSON: All right. So just to make
12 sure, are you at page 49 of 728?

13 **A. Yes.**

14 Q. Okay. And you see at the top of that page
15 the title "Affidavit"?

16 **A. Yes.**

17 Q. If you hold that page and you go to 168.
18 Are you there?

19 **A. Yes.**

20 Q. Okay. And you see a signature there?

21 **A. Yes, I do.**

22 Q. Okay. And can you make out that the

1 document is signed by Oliveira?

2 **A. The written signature I cannot decipher**
3 **that, but what is printed below it appears to be**
4 **Mr. De Oliveira's full name. Or Dr. I don't know**
5 **if it's doctor.**

6 Q. We'll say Dr. Oliveira just to be safe if
7 that works for you.

8 **A. I don't know.**

9 Q. Okay. So this would appear to be an
10 affidavit from Dr. Oliveira; is that fair?

11 MR. FELDSTEIN: Objection, foundation.

12 **A. I don't know. I have not reviewed this**
13 **entire document.**

14 Q. Okay. Well, it starts "Affidavit" and it
15 ends with his signature; is that fair?

16 MR. FELDSTEIN: Objection.

17 MR. CARSON: We were looking at page 49 of
18 728.

19 MR. FELDSTEIN: Objection, foundation,
20 form.

21 **A. I will agree on page 49 the word**
22 **"Affidavit" is there and Dr. Gilson Oliveira --**

1 **"Dr. Gilson Oliveira solemnly affirms" and then**
2 **Gibson -- I can't quite make it out, but**
3 **De Oliveira signs on page 168.**

4 Q. Okay. And if you go back to 49 --

5 A. It doesn't say Oliveira. The first says
6 **Oliveira. The last says De Oliveira.**

7 Q. Okay. If you go back to page 49, below
8 that reference to Dr. Gilson Oliveira that you read
9 there's a series of numbered paragraphs, right,
10 starting with No. 1?

11 A. Yes.

12 Q. And they continue through this document to
13 paragraph 192 just above his signature at page 168,
14 correct?

15 MR. FELDSTEIN: Objection, foundation.

16 A. That's what appears in the copy that I
17 **have, yes.**

18 Q. Okay. I just wanted to make sure we're on
19 the same page here.

20 Now, you testified earlier that the
21 document as a whole marked as Exhibit 1038 you
22 don't think you've seen before. Having looked at

1 the affidavit within, right, that runs from
2 pages 49 to 168, do you -- have you ever seen this
3 affidavit before?

4 **A. To the best of my knowledge, no.**

5 Q. Okay. And you see on page 168 that it's
6 signed July 7th -- I'm sorry -- June 7th, 2019?

7 **A. It says here dated 7th day of June 2019,**
8 **yes.**

9 Q. Okay. Let's go to paragraph 166 of this
10 affidavit, which appears on page 151 of 728. Let
11 me know when you're there.

12 **A. I'm on page 151.**

13 Q. Do you see paragraph 166?

14 **A. Yes.**

15 Q. And it references "Paper 16"; do you see
16 that?

17 **A. Yes.**

18 Q. Okay. So if you could hold that and then
19 go to the second half of this exhibit and turn to
20 page 643 of 728. Are you there?

21 **A. Yes.**

22 Q. Okay. And at the top of that it's marked

1 "Paper 16"; do you see that?

2 **A. Yes. It says "Paper 16," yes.**

3 Q. Okay. And if you look going forward, it
4 appears to be the Portuguese language reference
5 of -- I mean the Portuguese language version of the
6 Godoy reference in this case, Exhibit 1004,
7 correct?

8 MR. FELDSTEIN: Objection, foundation.

9 **A. That would appear to be true, but I**
10 **haven't compared them in detail.**

11 Q. Okay. Well, let's just look at the first
12 page. Do you have Exhibit 1004 there?

13 **A. Yes.**

14 Q. Do they appear to be the same document?

15 MR. FELDSTEIN: Objection, foundation.

16 **A. It's got the same title.**

17 Q. Any reason to doubt they're the same
18 document?

19 MR. FELDSTEIN: Object to form.

20 **A. Without going line by line, I can't be**
21 **absolutely sure, but it would appear to be so.**

22 Q. So it appears that Paper 16 is the

1 Portuguese language version of the Godoy reference
2 at issue here?

3 **A. It appears that document 16 is the**
4 **Syngenta Exhibit 1004, which I have seen before.**

5 Q. Okay. Okay. So that's Paper 16. I think
6 you can set that aside and, you know, if you want
7 to go back to it as we talk, you can, but I think
8 we can --

9 MR. FELDSTEIN: 1038?

10 MR. CARSON: Yep. I mean you can set that
11 second half of 1038 aside. We'll go back to the
12 first half of 1038, and I want to go back to
13 paragraph 166 that we were looking at before,
14 page 151 of 728 and the reference to Paper 16,
15 correct?

16 **A. Yes.**

17 Q. Okay. And you see where the UPL inventor
18 describes the Godoy reference as published August
19 2016.

20 MR. FELDSTEIN: Objection to the form --

21 Q. Do you see that?

22 MR. FELDSTEIN: Object to form and

1 foundation.

2 **A. That's what it says.**

3 Q. You read that, right? I'm not reading
4 that wrong, am I?

5 **A. Do you want me to read it back to you?**

6 Q. Well, that's a yes-or-no question. So if
7 you could just answer.

8 **A. Yes.**

9 Q. The answer's yes? Okay.

10 **A. Yes.**

11 Q. And if you go on from there to page 152 of
12 728 and 153 of 728, do you see the tables on those
13 two pages?

14 **A. Yes.**

15 Q. Those are the tables 3 and 5 from the
16 Godoy reference; is that correct?

17 **A. It would appear to be so.**

18 Q. Okay.

19 **A. Again, I have not compared them line by**
20 **line, but it would appear to be so, yes.**

21 Q. You're not seeing any differences between
22 them, are you?

1 **A. Do you want me to take the time to do it?**

2 Q. Take a look at it. It's Exhibit 1004,
3 right?

4 **A. From a cursory examination I would agree**
5 **they're the same.**

6 Q. Okay. Okay. So -- and, again, this
7 declaration was signed in -- this affidavit was
8 signed in 2019 and I believe you would agree that
9 Dr. Oliveira, the UPL inventor, is describing the
10 Godoy reference as having been published in August
11 of 2016, fair?

12 MR. FELDSTEIN: Objection to form.

13 **A. On page 151 of 728 of Exhibit 1038**
14 **Dr. Oliveira says Paper 16 was published in August**
15 **of 2016, paragraph 166.**

16 Q. All right. Let's -- you can set that on
17 top of the second half there of 1003. Let's look
18 at what we've marked as Exhibit 1035. I haven't
19 given it to you yet. Bear with me.

20 MR. FELDSTEIN: I would object to
21 Exhibit 1035.

22

1 (Syngenta Exhibit 1035 was
2 marked for identification.)

3 BY MR. CARSON:

4 Q. And feel free to take a look at it. The
5 question is whether you have seen this before.

6 A. No, I have not seen this before.

7 Q. Okay. Okay. Well, I will represent to
8 you that this was submitted by UPL to the Patent
9 Office in India as part of the same prosecution for
10 which the previous affidavit we looked at in
11 Exhibit 1038 was submitted, and this was submitted
12 in a prosecution involving an Indian patent
13 application that claims priority to the Oliveira
14 application, Exhibit 1007, that's at issue in this
15 proceeding.

16 Now, if you look at the second page of
17 Exhibit 1035, do you see it's titled "Affidavit"?

18 A. Yes.

19 Q. And do you see Dr. Oliveira's name below
20 that?

21 A. Yes, I do.

22 Q. And if we go to the last page --

1 second-to-last page of this exhibit, do you see his
2 signature?

3 MR. FELDSTEIN: Objection, foundation.

4 A. It would appear to be his signature. The
5 typed version looks like it's the same name.

6 Q. Okay. And this affidavit's dated
7 August 7th, 2023, correct?

8 A. Yes.

9 Q. So four or five months ago, right?

10 A. Yes.

11 Q. All right. If we could go to
12 paragraph 199 of this affidavit, which is page 59,
13 I believe, of 179.

14 A. I'm on page 59 of 179.

15 Q. Okay. And you can see that he's once
16 again in this prosecution referencing Paper 16; do
17 you see that?

18 MR. FELDSTEIN: Objection, foundation.

19 A. In paragraph 199 it says Paper 16.

20 Q. Okay. And we looked at Paper 16 earlier
21 and you confirmed that that appears to be Godoy
22 Exhibit 1004, correct?

1 MR. FELDSTEIN: Objection, form and
2 foundation.

3 **A. Restate your question.**

4 Q. Well, I think you were prepared to answer
5 it. So if you could just give me your answer,
6 we'll go on from there.

7 **A. No. I want to make sure --**

8 Q. So this --

9 **A. -- the precise wording of your question.**

10 Q. Okay. We looked at Paper 16 -- I'm not --
11 Dr. Jacobsen, I am not trying to trick you here.
12 We looked at Paper 16 earlier as part of
13 Exhibit 1038; do you remember that?

14 **A. Yes.**

15 Q. And we compared -- you compared Paper 16
16 to the Portuguese language version of Godoy,
17 Exhibit 1004, correct?

18 **A. That is correct.**

19 Q. And they appear to be the same document;
20 is that fair?

21 **A. They appear to be the same document.**

22 Q. Okay. So in this second affidavit from

1 Dr. Oliveira he's, again, referring to Paper 16 in
2 this paragraph; do you see that?

3 MR. FELDSTEIN: Objection, form and
4 foundation.

5 A. In paragraph 199 it says Paper 16
6 published in August of 2016.

7 Q. Okay. So that sort of gets to my next
8 question. So Dr. Oliveira is stating again in this
9 affidavit four years later that the Godoy reference
10 was published in August of 2016, correct?

11 MR. FELDSTEIN: Objection to form and
12 foundation. Go ahead.

13 MR. CARSON: I'm simply asking if that's
14 what he's saying here.

15 MR. FELDSTEIN: Objection, form and
16 foundation. Go ahead.

17 A. Once again, looking at paragraph 199,
18 De Oliveira is saying Paper 16 was published in
19 August of 2016.

20 Q. Okay. Do you have any reason to doubt
21 that Dr. Oliveira is being accurate in his
22 affidavit?

1 MR. FELDSTEIN: Objection to foundation.

2 A. If it's a sworn affidavit, I'm assuming
3 that he's being accurate.

4 Q. Okay.

5 When you -- so I think you said you hadn't
6 seen these documents before, right?

7 A. That is correct.

8 Q. So when you prepared your declaration in
9 this case and signed it, you had not seen these
10 statements by Dr. Oliveira, fair?

11 A. The only De Oliveira materials I've seen
12 are found on -- are cited in my declaration.

13 Q. Okay. Which don't include the two
14 affidavits we've just looked at, correct?

15 A. I believe that's correct.

16 Q. Do you think these two affidavits would
17 have helped inform your opinions with respect to
18 Godoy?

19 MR. FELDSTEIN: Objection, form,
20 foundation.

21 A. I don't know. I haven't -- not having
22 read them, they might have and they might not

1 **have.**

2 Q. Okay. But you weren't provided copies of
3 them as you prepared your declaration?

4 **A. That's what I've said.**

5 Q. Looking at -- I'm sorry. You closed it,
6 but if you could go back to paragraph 199 of
7 Exhibit 1035, which was at page 59.

8 **A. Yes.**

9 Q. You've reviewed the Godoy reference,
10 correct?

11 **A. Yes.**

12 Q. Okay. Do you agree with the UPL inventor,
13 Dr. Oliveira, his description of Godoy as provided
14 in paragraph 199?

15 MR. FELDSTEIN: Objection, form.

16 **A. I'm going to take the time to read 199.**

17 Q. Okay.

18 (Witness reviewing document.)

19 **A. Do I agree -- I'm going to rephrase your**
20 **question, if I might.**

21 Q. Okay.

22 **A. Am I agreeing that what is written here is**

1 a reasonable presentation of the data that is in
2 the Godoy paper, and it would appear so.

3 Q. Is there anything that the UPL inventor
4 says about Godoy in this paragraph that you feel is
5 inaccurate?

6 A. I don't see anything right offhand.

7 Q. Okay. What appears in the affidavit after
8 paragraph 199?

9 A. We go to table 3, which is -- appears to
10 be the same as table 3 in Exhibit 1004.

11 Q. Okay. And then after that?

12 A. Table 5, it is also in 1024.

13 Q. 1004?

14 A. 1004.

15 Q. Okay. Going back to 1035 and looking now
16 at paragraphs 200 and 201.

17 A. Yes.

18 Q. Where the UPL inventor, Dr. Oliveira,
19 continues his discussion of Godoy; do you see that?

20 A. I see starting in paragraph 201 "Thus, it
21 is clear" and then he's discussing the trials done
22 in 2015 and '16. So I believe he's still

1 **discussing the Godoy paper.**

2 Q. And paragraph 200 is discussing Godoy as
3 well, right?

4 MR. FELDSTEIN: Objection to form,
5 foundation.

6 A. **Again, I haven't looked at --**

7 Q. I understand.

8 A. **I believe it is -- it's tracking from**
9 **paragraph 199.**

10 Q. So let's assume paragraphs 200 and 201 are
11 addressing the Godoy reference we've been talking
12 about.

13 A. **Okay.**

14 Q. Do you see anything in here that's
15 inaccurate, these two paragraphs?

16 A. **No.**

17 MR. CARSON: Can I suggest we take a quick
18 break.

19 (A break was had.)

20 BY MR. CARSON:

21 Q. Welcome back, Dr. Jacobsen.

22 Quick question. Did you -- have you been

1 discussing your testimony with your counsel during
2 the breaks?

3 **A. No.**

4 Q. Okay. And I assume you don't intend to do
5 so today; is that correct?

6 **A. I've been told I can't.**

7 Q. Okay. Great. I just wanted to clarify
8 that.

9 I want to go back to a couple things. So
10 Exhibit -- pardon me -- Exhibit 1022, which is
11 somewhere in your growing pile of documents --

12 **A. 1022. Okay. 1022.**

13 Q. Okay. And this was the supplemental
14 Hall-Ellis declaration that you had not seen
15 before, right?

16 **A. That is correct.**

17 Q. Okay. I want to direct your attention to
18 paragraph 5 of that declaration. It's page 3 I
19 believe. Are you there?

20 **A. Yes.**

21 Q. Okay. And you see there's an image there
22 on that page, right; do you see that?

1 **A. Yes.**

2 Q. And at paragraph 5 Ms. Hall-Ellis says
3 "EMBRAPA provides statistics on its publications.
4 As illustrated by the below image, the Godoy report
5 was downloaded and viewed as early as September
6 23rd, 2016"; do you see that?

7 **A. I see that, yes.**

8 Q. Okay. And then there's the image below
9 that that she references; do you see that?

10 MR. FELDSTEIN: Objection, foundation.

11 MR. CARSON: I'm just asking if you see
12 it.

13 **A. I see an image, yes.**

14 Q. Okay. Great.

15 Bear with me here. And at the top -- near
16 the top anyway, it says "Number of downloads and
17 views in the period"; do you see that? Near the
18 top of the image.

19 **A. I see a thing here that says "Downloads**
20 **and views" and then to the side of that is**
21 **"Export." Is that what you're talking about?**

22 Q. Right below that.

1 A. **Oh, "Downloads and views - time series"?**

2 Q. Right below that.

3 A. **Yes, I see that. Okay.**

4 Q. Okay. What does that say just to make
5 sure we're on the same page here.

6 A. **Yes.**

7 Q. Could you read it to me.

8 A. **"Number of downloads and views in period."**

9 Q. Okay. And does the document indicate the
10 period anywhere?

11 MR. FELDSTEIN: Objection, foundation.

12 A. **"Month" is highlighted and there's a**
13 **document number in September and then 2016.**

14 Q. Okay. And below that a little further
15 down there's a box that the title bar says
16 "Downloads and views"?

17 A. **Yes. That's where I was looking before,**
18 **yes.**

19 Q. Okay. What do you see there?

20 A. **It says "Day," this is a date, which I**
21 **assume is in September, day, Friday, Saturday,**
22 **Sunday, Monday, Tuesday, et cetera, "Downloads and**

1 **views" so it gives the number of downloads and**
2 **views on those specific dates.**

3 Q. Okay. So do you see any indication here
4 of downloads of the Godoy reference in September
5 2016?

6 MR. FELDSTEIN: Objection, foundation.

7 MR. CARSON: Go ahead.

8 A. **What's on page 3 would indicate to me that**
9 **there was one download and one view on**
10 **September 23rd, which is a Friday, of 2016.**

11 Q. And any other downloads or views in the
12 month of September?

13 MR. FELDSTEIN: Objection, foundation.

14 A. **In that box it shows there was a total of**
15 **nine downloads from September 23rd to**
16 **September 30th and a total of 11 views.**

17 Q. So let's assume that this document you're
18 looking at is accurate. Okay. The image that
19 you're looking at.

20 A. **I've got no reason to say it isn't, but**
21 **I've got no reason to say it is.**

22 Q. Okay. So then if you've got no reason to

1 say it isn't, let's assume it is. Okay. Assume
2 it's accurate.

3 **A. Okay.**

4 Q. Let's assume it actually did come from the
5 EMBRAPA site and it accurately reflects downloads
6 in September of 2016.

7 **A. Okay.**

8 Q. Would this information, assuming it's
9 accurate, be relevant to making a determination as
10 to whether the reference was publicly available in
11 September of 2016?

12 MR. FELDSTEIN: Objection, calls for a
13 legal conclusion, foundation.

14 **A. It depends on your definition of publicly**
15 **available. If it was only available in the**
16 **Portuguese language and it wasn't in a citation**
17 **index that other people could view, in other words,**
18 **I could -- sitting at the University of Illinois if**
19 **I was there -- or in 2016 I was at Montana State,**
20 **if I did a search engine could I have found it as**
21 **of that date.**

22 Q. Okay. As of that date --

1 MR. FELDSTEIN: He wasn't done, Counsel.

2 A. That's my question, could I have found it
3 as of that date.

4 Q. Okay.

5 A. And I think the more important date is
6 November 4th of that year.

7 Q. Okay. So you've accessed the EMBRAPA site
8 before, you've testified to that, right?

9 A. Yes.

10 Q. Okay. And you've accessed it to download
11 documents, correct?

12 A. Yes, that I found from citation indexes.
13 You know, I've done a search and then I've gotten
14 into --

15 Q. Okay. Let me -- so assuming this image is
16 accurate, it reflects downloads by the public in
17 September 2016, correct?

18 MR. FELDSTEIN: Objection to form and
19 foundation, misstates the document.

20 A. It reflects downloads. It does not tell
21 me who downloaded it.

22 Q. Okay. Fair enough.

1 **A. And it doesn't tell me if it was -- it**
2 **doesn't tell me who downloaded it or where they**
3 **were, et cetera.**

4 Q. Okay. So in rendering an opinion, though,
5 on when Godoy was publicly available, is this kind
6 of data the sort of thing that one would look at
7 and consider?

8 MR. FELDSTEIN: Objection, calls for a
9 legal conclusion.

10 **A. This data is what it is. It doesn't tell**
11 **me that this document was publicly available to**
12 **scientists worldwide.**

13 Q. It does give you information, though,
14 related to public availability, correct?

15 **A. Yes, I'll agree to that.**

16 Q. Okay. And if you were going to render an
17 opinion on the publicly available -- the public
18 availability of a document, wouldn't you want
19 access to all of the information related to that
20 question?

21 MR. FELDSTEIN: Object to form, calls for
22 a legal conclusion.

1 **A. I would want information available to one**
2 **of the more commonly used or the commonly used**
3 **indexing sites. In other words, was this EMBRAPA**
4 **publication indexed with a DOI identifier or some**
5 **other type of identifier such that sitting at**
6 **Montana State University or Berlin, Germany or**
7 **Kolkata, India, I could have found it.**

8 Q. So that's some information you would be
9 interested in, right?

10 **A. Yes.**

11 Q. My question though wasn't about that. My
12 question was whether this particular information
13 could be something that you would want to look at
14 and consider in conjunction with everything else in
15 deciding whether or not it's publicly available.

16 MR. FELDSTEIN: Objection, asked and
17 answered, calls for a legal conclusion, form.

18 MR. CARSON: Go ahead.

19 **A. I'm going to stay with the answer that I**
20 **gave you.**

21 Q. Well, I just asked you a different
22 question. So you need to answer that one.

1 MR. FELDSTEIN: Same objections.

2 A. This information plus other information
3 would be required for me to determine whether the
4 Godoy publication was publicly available.

5 Q. Okay.

6 If we could go now to paragraph 53 of the
7 declaration.

8 A. Of 1022?

9 Q. Yes, sir. Just let me know when you get
10 there.

11 A. What page is that on?

12 Q. 20. It starts at page 20. Are you there?

13 A. I see page -- paragraph 53, yes.

14 Q. Okay. If we go to the top of page 21.

15 A. Yes.

16 Q. Do you see where it says "Dr. Godoy
17 uploaded copies of the Godoy report to share with
18 her colleagues as of September 9, 2016 based on the
19 information recorded in ResearchGate"?

20 A. I see that, yes.

21 Q. So as you read this, assuming it's true,
22 it indicates that Godoy uploaded her publication to

1 ResearchGate, correct?

2 MR. FELDSTEIN: Object to form and
3 foundation.

4 A. That's what it says.

5 Q. And did so on September 9, 2016?

6 MR. FELDSTEIN: Objection to form and
7 foundation.

8 A. That's what it says.

9 Q. Okay. And you testified earlier today
10 that you use ResearchGate or at least did when you
11 were doing your scientific work, right?

12 A. Yes.

13 Q. So do you know whether if a document's
14 been uploaded to ResearchGate a person like you can
15 then go to ResearchGate and download it?

16 MR. FELDSTEIN: Objection to form.

17 A. I do not know if it's instantaneous or
18 there's some lag. I don't know that.

19 Q. Okay. So you think there might be a lag?

20 MR. FELDSTEIN: Objection, misstates the
21 testimony.

22 A. I don't know.

1 Q. Do you have any reason to think there's a
2 lag?

3 **A. In my experience in many of these kinds of**
4 **situations there is a lag, yes.**

5 Q. But what about your experience with
6 ResearchGate specifically because that's what you
7 have experience with, correct?

8 MR. FELDSTEIN: Objection, misstates the
9 testimony. Go ahead, Doctor.

10 **A. My experience with ResearchGate was a long**
11 **time ago and the specifics of how ResearchGate**
12 **operates I don't remember.**

13 Q. So if there was evidence out there that
14 the Godoy publication was accessible through
15 ResearchGate in September of 2016, is that
16 information that you would consider if you were
17 trying to decide whether the document was publicly
18 available?

19 MR. FELDSTEIN: Objection, calls for a
20 legal conclusion.

21 MR. CARSON: I'm just asking whether you
22 think about -- or would look at it and consider

1 it.

2 MR. FELDSTEIN: Objection, calls for a
3 legal conclusion, incomplete hypothetical.

4 **A. It would seem reasonable to consider it.**

5 MR. CARSON: Okay. I want to mark -- or
6 have marked as Exhibit 1039 this document.

7 MR. FELDSTEIN: Do you have a copy,
8 Counsel?

9 MR. CARSON: I don't.

10 This is the patent owner preliminary
11 response, so UPL's preliminary response.

12 MR. FELDSTEIN: Is this a complete version
13 of the paper, Counsel?

14 MR. CARSON: Yes, it is.

15 (Syngenta Exhibit 1039 was
16 marked for identification.)

17 BY MR. CARSON:

18 Q. Dr. Jacobsen, you testified earlier that
19 you couldn't recall whether you've seen this
20 preliminary response, and I thought it might be
21 useful just to put it in front of you to see if it
22 refreshes your recollection as to whether you saw

1 it. So just take your time to look through it.

2 **A. I don't believe that I've seen this.**

3 Q. And that's based on the first page and the
4 table of contents?

5 **A. Yes, and then -- yeah.**

6 Q. Okay. Well --

7 **A. The first three pages just looking, I**
8 **don't recognize it.**

9 Q. Let's thumb through a little bit more of
10 it, if you could, just to confirm.

11 **A. Going on the table of authorities, I don't**
12 **believe I've ever seen this before. I don't**
13 **believe that I've seen this.**

14 Q. Okay.

15 **A. Although I want to say that I have not**
16 **gone page by page to see if I've seen some parts of**
17 **it. I don't know.**

18 Q. Well, would it be helpful to look at more
19 of it?

20 MR. FELDSTEIN: Objection to form.

21 **A. I can sit here and read it if you want me**
22 **to.**

1 Q. I don't want you to read it, but if I just
2 want you to -- I mean, if you feel like to answer
3 the question you need to review a little bit more
4 of it, I want you to feel free to take the time to
5 do it.

6 **A. I don't believe that I've seen this.**

7 Q. Okay.

8 If we could change gears just a little bit
9 here. I believe we discussed soybean rust at least
10 a bit earlier today and you told me it was not a
11 problem in Illinois back when you were a professor
12 there; is that fair?

13 **A. That is correct.**

14 Q. Okay. You're familiar with soybean rust,
15 though?

16 **A. Very familiar.**

17 Q. Okay. Can you just tell me as a layperson
18 what is soybean rust?

19 **A. Well, Asian soybean rust is -- first was**
20 **found I believe in Southeast Asia and then it made**
21 **like significant news when it was found in**
22 **South America, and it's been identified here in**

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1 southern United States -- it's been found other
2 places in the United States, but it's only been in
3 the United States an economic problem in just a few
4 situations in the very southern -- down in the Gulf
5 Coast area. It's a disease of great concern
6 because where it occurs in Asia and in South
7 America it's a very important disease and
8 significant yield losses.

9 And the other thing that's of great
10 concern up until just recently, the last few years,
11 we didn't have any genetic sources of resistance
12 and in plant pathology generally we want to use
13 host plant resistance as much as possible. In this
14 case up until just recently we've been totally
15 dependent on fungicides for control of this
16 disease. That's kind of a nutshell for you.

17 Q. Thank you.

18 So what does it actually look like? Can
19 you describe it?

20 A. There are pustules or lesions on the
21 leaves, they're airborne spores, it's wind
22 disseminated. I don't remember the exact time from

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1 infection to spoliation, I don't remember that, but
2 this disease can blow up very, very rapidly.
3 Typically in soybeans if you de- -- and it will
4 result in defoliation or loss of photosynthetic
5 area and thereby affecting the yield, and there are
6 secondary effects in terms of protein and oil seed
7 yield, et cetera. If that defoliation occurs from
8 the time of blossom through what we call pod fill
9 or seed filling, the earlier it occurs in that
10 stage the more severe the economic losses.

11 Q. Does it attack just the leaves or the
12 stems of the plant as well?

13 A. It's primarily the leaves.

14 Q. Does it penetrate the surface of the
15 leaf?

16 A. Yes. The fungus -- the spores germinate
17 on the surface, produces a germ tube that goes in
18 and infects the plant.

19 Q. And the germ tube actually goes into --

20 THE REPORTER: I'm sorry. Produces a what
21 tube?

22 A. Germ tube. And then the fungus

1 proliferates inside the leaf tissue and it will
2 remain alive and active so long as that leaf tissue
3 is alive. Once the leaf tissue is dead, then you
4 only have the remaining spores that are more
5 tolerant of a drying or dormant state.

6 Q. So it's visible on the surface or from the
7 surface, correct?

8 A. Absolutely, yes.

9 Q. But the fungus itself is in the leaf
10 tissue under the surface?

11 A. What you're viewing on the surface are the
12 pustules, you're viewing the fungus, but there's
13 also mycelial growth in between the leaf cells.

14 Q. So it penetrates the leaf?

15 A. Yes. And then from the mycelia there's a
16 thing called the haustoria that goes into the
17 individual cell. Because it's an obligate parasite
18 it needs to feed on living plant tissue.

19 Q. So as it kills plant tissue it has to dig
20 deeper for more?

21 A. Well, it's got to -- or infect new plant
22 tissue.

1 Q. I see. Okay. Thank you.

2 If we go back to Godoy -- thanks for that
3 little tangent. Appreciate it. Unless you know or
4 are fluent in Portuguese, we can refer to
5 Exhibit 1005, which is the English translation.

6 A. Thank you.

7 Q. Okay.

8 Now, I want to get a sense of kind of your
9 general opinions about Godoy. I'm correct, sir,
10 that it's your opinion that a person of ordinary
11 skill in the art would read Godoy, Exhibit 1005, to
12 disclose the sequential application of the
13 disclosed fungicidal treatments; is that your view?

14 A. That's my interpretation, yes.

15 Q. Okay. And so a person -- sort of the flip
16 side of that is a person of ordinary skill in the
17 art in your view would not read Godoy to disclose
18 the applications as a tank mix?

19 A. That is correct.

20 Q. Okay.

21 And is it fair to say that one of the
22 reasons you've reached that opinion is because in

1 your view Godoy refers to associations of active
2 ingredients and not combinations of active
3 ingredients?

4 **A. That's one of the reasons.**

5 Q. Okay. But Godoy actually does use the
6 term "combination," doesn't it? I'm happy to help
7 focus you if you would like.

8 **A. If you could tell me where in Godoy the**
9 **word "combination" is used.**

10 Q. Are you aware that it does appear?

11 **A. I'm looking for it.**

12 Q. But you've read it before?

13 **A. Yes.**

14 Q. And are you aware that it does use the
15 term or not aware?

16 **A. I'm just going through it. Just a second.**

17 Q. Let me strike that and ask you a different
18 question, if I could, Dr. Jacobsen.

19 **A. Go ahead, yes.**

20 Q. Do you recall whether or not Godoy
21 describes its applications as a combination?

22 **A. I would need to refresh my memory by**

1 **looking at the paper. If you could show me where**
2 **it is in the paper.**

3 Q. I will. I'm just asking you if you recall
4 whether it does. If the answer's no, that's fine.

5 **A. The answer is no.**

6 Q. Okay.

7 If we could go to the bottom of page 5 --
8 you know, my copy doesn't have numbered pages. So
9 let's do this. Do you see the page that has
10 table 3 on it?

11 **A. Yes.**

12 Q. Okay. If we could go to the next page and
13 there's a paragraph at the bottom of that page,
14 right column that starts "In the joint analysis";
15 do you see that? I'm just asking you if you've
16 found it.

17 **A. Yes.**

18 Q. And at the top of the next page Godoy uses
19 the phrase "in all combinations"; do you see that?

20 **A. Oh, "In association with multisite in all**
21 **combinations," yes, I see that.**

22 Q. So I mean, that's a use of the term

1 "combination" to describe treatments, correct?

2 **A. Yes.**

3 MR. FELDSTEIN: Objection.

4 THE WITNESS: It says combinations. It
5 doesn't say tank mixes.

6 Q. Well, we're talking about combinations.
7 In your view combination is a tank mix, right?
8 That's the opinion in your declaration?

9 MR. FELDSTEIN: Objection, misstates the
10 testimony.

11 **A. Having read the Godoy paper, I do not**
12 **believe that her use of the word "combination" is**
13 **referring to a tank mix.**

14 Q. Okay. In your declaration you focus on
15 the fact that Godoy uses elsewhere the term
16 "association," correct?

17 **A. Yes.**

18 Q. And you don't reference anywhere in your
19 declaration the fact that Godoy also uses the term
20 "combination", do you?

21 **A. I don't believe I did, no.**

22 Q. Okay. Any particular reason why you

1 didn't address that?

2 **A. Because I do not believe on reading Godoy**
3 **she applied combinations, e.g. tank mix.**

4 Q. Okay. You don't say that in your
5 declaration?

6 MR. FELDSTEIN: Objection, misstates
7 testimony.

8 **A. Not in those words I don't.**

9 Q. Okay. Nowhere in your declaration do you
10 explain away Godoy's use of the term "combination"
11 that we just looked at, do you?

12 MR. FELDSTEIN: Object to form.

13 **A. I believe I do.**

14 Q. You actually note and address the fact
15 that Godoy uses the term "combination"?

16 **A. No, I do not -- didn't say that. I said I**
17 **believe I address it. She indicates -- it's a**
18 **multi-authored paper, by the way, with her as the**
19 **senior author. She indicates in her tables that**
20 **she added Nimbus to the latest product, not to the**
21 **associated product. If you look at the tables**
22 **where she's talking about the true combinations**

1 where she's added Nimbus, where she's indicating,
2 for example, picoxystrobin or cyproconazole, it
3 says plus. Then in table 3 it says "Picoxystrobin
4 plus cyproconazole and copper oxychloride." So
5 associated treatments are all listed as "and," not
6 indicated as "plus." So obviously those have two
7 different meanings to the author. If they were
8 true combinations, in other words, tank mixes, they
9 would have said picoxystrobin plus cyproconazole
10 plus copper oxychloride. That's my interpretation.

11 Q. So are you aware that Dr. Oliveira, the
12 UPL inventor, has described Godoy as disclosing
13 combinations?

14 MR. FELDSTEIN: Objection, form and
15 foundation.

16 A. No, I'm not aware of that.

17 Q. If we could go back to Exhibit 1021, which
18 we looked at before.

19 A. I've looked at 1021 and at 1022. 04, 05,
20 06, 1039, 1035, 1038. So I don't see that.

21 Q. Well, you've got it. It's the de Oliveira
22 declaration, Exhibit 1021. We looked at it

1 earlier.

2 **A. Oh, the de Oliveira declaration. Is it**
3 **here?**

4 Q. That's a different exhibit. If we could
5 just maybe go off the record for a second so that
6 you can find it. I know I gave it to you. We
7 discussed it earlier.

8 MR. FELDSTEIN: It looks like this.

9 **A. Oh, that one? Oh, here it is. 1021.**

10 Q. Okay. And back to paragraph 38, which we
11 looked at before. Are you there?

12 **A. I'm on page 14 of 15, paragraph 38.**

13 Q. Okay. And you'll see here that the UPL
14 inventor, Dr. Oliveira -- excuse me -- Dr. Oliveira
15 describes Godoy as an evaluation of the combination
16 of fungicides; do you see that?

17 **A. Yes, I see that.**

18 Q. Okay. And if we go to 1038, which was the
19 large stack there, paragraph 168, which is at
20 page 153.

21 **A. Page 153 and paragraph what?**

22 Q. 168.

1 **A. Yes, I see that.**

2 Q. And do you see there where the UPL
3 inventor, Dr. Oliveira, describes again Godoy as
4 involving combinations of fungicides?

5 **A. In paragraph 168 I see the use of the word**
6 **"combinations."**

7 Q. Okay.

8 Would you agree with me that Dr. Oliveira
9 is at least a person of ordinary skill in the art
10 as you've defined the term here?

11 MR. FELDSTEIN: Objection to foundation.

12 **A. I have not seen his CV, but yes.**

13 Q. You would agree with that?

14 **A. Yeah.**

15 Q. Okay. And Dr. Oliveira reads Godoy
16 differently from you, doesn't he?

17 MR. FELDSTEIN: Objection, form and
18 foundation.

19 **A. Words matter. People use the term**
20 **"combination" in many different manners, and I**
21 **think it's important that it be defined and I will**
22 **use an example.**

1 In Exhibit 1001, the '727 Patent, it
2 defines combinations. Okay? If we go to
3 Mr. Tobler's -- wherever that is -- Exhibit 10 --
4 1006, Mr. Tobler defines combinations quite
5 differently. So it's important to know what
6 definition you're using.

7 In my term after looking at the
8 '727 Patent, I'm using that definition for
9 "combination," e.g. a tank mix.

10 Q. Okay. So if "combination" means tank mix
11 in your view --

12 A. In view of the '727 Patent, "combination"
13 means tank mix, yes.

14 Q. Okay. But when you read the term
15 "combination" in Godoy, you don't treat that as a
16 tank mix; is that fair?

17 A. As I look at Dr. Godoy's tables in the
18 '216 publication and that is the 1005, what I see
19 there does not indicate tank mix combinations.

20 Q. Okay.

21 Can we take a look at what has previously
22 been marked in this proceeding as Exhibit 1030.

1 **A. 1030.**

2 MR. FELDSTEIN: He's going to provide it
3 to you.

4 THE WITNESS: Oh, okay.

5 MR. FELDSTEIN: Thank you. I'm going to
6 object to Exhibit 1030.

7 BY MR. CARSON:

8 Q. Dr. Jacobsen, have you -- take as much
9 time as you need. Have you seen this document
10 before?

11 **A. I believe so, but I didn't use this in**
12 **rendering my opinion.**

13 Q. Why not?

14 **A. It wasn't -- this was published in 2022.**
15 **So I viewed -- I really looked at things that were**
16 **at that time or related to mixtures of different**
17 **fungicides. So no, I did not review this paper.**

18 Q. Well, I thought you just testified you did
19 review it but you didn't rely on it.

20 MR. FELDSTEIN: Objection, misstates the
21 testimony.

22 **A. I have seen it. I haven't reviewed it**

1 **extensively.**

2 Q. Okay. When did you see it?

3 **A. I believe for the first time a day or two**
4 **ago.**

5 Q. Okay. So you didn't see it before you
6 prepared your declaration?

7 **A. No, I did not.**

8 Q. Having now seen it, is it something that
9 you would have liked to have seen before you wrote
10 your declaration?

11 **A. With the title that it has, it would have**
12 **been interesting, but I don't know that it's**
13 **germane to something that happened in 2016.**

14 Q. Do you understand that the document
15 references and describes the Godoy reference that's
16 at issue in this proceeding?

17 **A. Yes, that was pointed out to me.**

18 Q. And that fact would not have been
19 something you'd want to consider before rendering
20 your opinion?

21 **A. I read the original Godoy 2016 reference**
22 **in detail as a critical editor would read it, and**

1 **this -- what is stated here is that difference with**
2 **my technical reading of the 2016 publication.**

3 Q. Okay. Do you understand that this
4 document describes Godoy as having used tank mixes?

5 A. **That's what it says.**

6 Q. Okay. So --

7 A. **Just because it says it doesn't mean it's**
8 **accurate.**

9 Q. Okay. But it does say it, correct?

10 A. **That's what it says.**

11 Q. Okay. And the first named author of the
12 document, Mr. Machado, do you see that?

13 A. **Yes.**

14 Q. Do you have any reason to doubt that he's
15 at least a person of ordinary skill in the art?

16 MR. FELDSTEIN: Objection, foundation.

17 A. **I have not seen his CV. I don't know why**
18 **not. I think the more germane thing is Claudia**
19 **Godoy is an author on this paper.**

20 Q. Okay. We'll get to her. Machado, as far
21 as you're concerned, he's not -- you have no reason
22 to think he's not a person of ordinary skill in the

1 art, correct?

2 MR. FELDSTEIN: Objection to foundation.

3 **A. I have no reason to believe that.**

4 Q. I mean you read this paper, correct?

5 MR. FELDSTEIN: Objection, misstates the
6 testimony.

7 **A. I reviewed -- I didn't review the entire**
8 **paper. I reviewed sections of this paper.**

9 Q. Well, Mr. Machado's reading of Godoy as a
10 person of ordinary skill in the art differs from
11 yours, fair?

12 MR. FELDSTEIN: Objection to form and
13 foundation, misstates the evidence.

14 **A. I agree that he reads it differently than**
15 **I do.**

16 Q. Okay. Is someone -- is another person of
17 ordinary skill in the art's reading of the
18 reference at all related to whether or not a person
19 of ordinary skill in the art would read the
20 reference in a certain way?

21 MR. FELDSTEIN: Objection to form, calls
22 for a legal conclusion.

1 A. I'm going to answer that with my
2 experience as being an editor of scientific papers
3 and a technical editor of scientific papers. It is
4 very critical that when you cite someone else's
5 work that you go back and in detail you can
6 document what you said. So I believe that my
7 critical reading of the Godoy 2016 paper that we've
8 been discussing, I believe that my interpretation
9 is the correct interpretation. As a blanket
10 statement if we use the word "combinations" in a
11 different manner, that's up to a person, but
12 critical reading, if I had edited this paper and
13 one of the things an editor does is go back and
14 looks at the references, I would have said to
15 Mr. Machado that's not correct.

16 Q. So you disagree with him?

17 A. Yes.

18 Q. But you do agree that there are scientists
19 who read Godoy differently than you?

20 MR. FELDSTEIN: Objection, form,
21 foundation.

22 A. I can't be responsible for how other

1 **people read things. I can be responsible for how I**
2 **read it.**

3 Q. I know, but you would agree that there are
4 persons of ordinary skill in the art, this art, who
5 read Godoy differently than you?

6 MR. FELDSTEIN: Objection, form,
7 foundation, misstates the record.

8 **A. I don't know.**

9 Q. Well, Mr. Machado reads it differently
10 than you, correct?

11 **A. I see that, yes.**

12 Q. Okay. Do you think Claudia Godoy is aware
13 of the nature of the experiments she conducted and
14 published in her own reference in 2016?

15 MR. FELDSTEIN: Objection, foundation.

16 **A. She certainly should be.**

17 Q. Okay. Any reason why she would
18 misrepresent what was in that paper?

19 MR. FELDSTEIN: Objection, foundation.

20 **A. I don't know that she intentionally**
21 **misrepresented anything.**

22 Q. Well, she's an author of this exhibit as

1 well.

2 A. Yes. I acknowledged that earlier.

3 Q. So she apparently understands her own
4 experiment as described in her own reference to
5 involve a tank mix; is that fair?

6 MR. FELDSTEIN: Objection, form and
7 foundation.

8 A. What is written in this paper has nothing
9 to do with my interpretation -- critical
10 interpretation of the Godoy 2016 paper, and I point
11 out that Nimbus was added to one component, not to
12 the other component. She talks about associated
13 treatments where she's talking about the components
14 that had Nimbus. She acknowledges -- she puts that
15 with a plus sign, to me this is indicating that
16 they were mixed together, and then she uses the
17 word "and." So in her mind she may have thought I
18 did tank mixes or I did this treatment in the
19 morning and I did this treatment in the afternoon
20 and that was the treatment. All I'm saying to you
21 is the critical reading of Godoy, that is my
22 interpretation.

1 Q. Yeah. I understand that's your
2 interpretation. I'm just trying to establish that
3 your interpretation of that reference is different
4 from Mr. Machado's interpretation of the reference.

5 MR. FELDSTEIN: Objection to --

6 MR. CARSON: That's all I'm asking.

7 MR. FELDSTEIN: Sorry. Objection to form
8 and foundation.

9 A. I believe that if I had gone back to
10 Mr. Machado or Dr. Godoy and said exactly what do
11 you say in this 2016 paper, they would agree with
12 my interpretation.

13 Q. Okay. But that's not reflected in the
14 Machado exhibit, correct?

15 A. That's not what that says.

16 Q. Okay.

17 So in your declaration you don't mention
18 the Machado article, correct?

19 A. No.

20 Q. And you don't mention the de Oliveira
21 declarations that we've looked at that describe
22 Godoy as a combination, correct?

1 **A. I don't mention any of those documents. I**
2 **indicated I had not seen them.**

3 Q. Okay. But you do mention some documents
4 outside of Godoy to support your opinion?

5 **A. Yes.**

6 Q. And one of those is de Souza, right?

7 **A. Yes.**

8 Q. Okay. So did you explain to me why you
9 considered de Souza worth mentioning but not
10 Machado or the UPL inventor's documents?

11 MR. FELDSTEIN: Object to form, misstates
12 the record.

13 **A. Will you show me in my declaration where**
14 **I'm discussing de Souza, please.**

15 Q. I believe it starts at paragraph 105.

16 So let me strike that question and I'll
17 ask you a different one now that you're in the part
18 of your report where you address de Souza.

19 **A. Yes.**

20 Q. Okay. Did you find de Souza?

21 **A. It was provided to me.**

22 Q. Okay. Later in this section at

1 paragraph 109 you cite to Reis?

2 **A. Yes.**

3 Q. Exhibits 2040 and 2041?

4 **A. Yes.**

5 Q. Did you find those references?

6 **A. That was -- that was a reference that was**
7 **provided to me.**

8 Q. Okay. So both de Souza and Reis were
9 provided to you?

10 **A. That's correct.**

11 Q. Okay. Does de Souza mention Godoy at all?

12 **A. I don't recall.**

13 Q. Do you recall whether de Souza
14 characterizes the Godoy reference -- the Godoy
15 publication in any way?

16 **A. At this moment I don't recall.**

17 Q. Okay. What about Reis, does it discuss
18 Godoy?

19 **A. I do not recall that.**

20 Q. You don't -- to the extent either of those
21 mention Godoy, you don't note that in your report,
22 do you?

1 **A. No. I think that those were put in there**
2 **because of the word -- both Reis and de Souza are**
3 **Portuguese speaking scientists, and the term**
4 **"association" was used in their paper not to**
5 **describe tank mixes. They were associated**
6 **treatments.**

7 **Q. Okay. That's their studies?**

8 **A. So that was the link there.**

9 **Q. All right. Can we go to paragraph 103 of**
10 **your declaration.**

11 **A. Yes.**

12 **Q. So I guess I'm going to summarize what I**
13 **think paragraph 103 says, and you can tell me if**
14 **I'm being accurate.**

15 **A. Pardon?**

16 **Q. I said I'm going to summarize what I**
17 **believe 103 is saying, and you can tell me if I'm**
18 **accurate or not. You're saying here, if I'm**
19 **understanding correctly, that applying the Godoy**
20 **treatments sequentially would involve 12**
21 **preparations and applications?**

22 **A. That's correct.**

1 Q. So 12 preparations and 12 applications?

2 A. Well, yes. That's what it says, yes.

3 Q. Whereas applying the Godoy treatments as
4 tank mixes would involve 22 different preparations
5 and applications; is that correct?

6 A. That is correct.

7 Q. So if we focus on the sequential
8 treatments, don't you have to cover the same area
9 twice?

10 MR. FELDSTEIN: Object to form.

11 A. Physically, yes.

12 Q. Okay. So I would have -- say, for
13 example, if we focus on the treatment area for
14 azoxy, benzo, and mancozeb, with sequential
15 application the particular area that gets that
16 treatment, you would have to cover that area
17 twice?

18 A. Yes.

19 Q. Right. You'd spray it the first time
20 covering all of the area with the azoxy, benzo, and
21 then you'd go back and cover the area again
22 spraying the mancozeb?

1 MR. FELDSTEIN: Objection, misstates the
2 evidence, the declaration.

3 MR. CARSON: Okay. I'm not -- I'm not --
4 you've already answered the question. So I'm going
5 to go to the next question.

6 THE REPORTER: I didn't get the answer
7 because everyone was talking at once.

8 MR. FELDSTEIN: Let me object first.
9 Object to form, misstates the evidence.
10 Go ahead, Doctor.

11 **A. What I'm referring to, let's just say**
12 **we've got all of the latest treatments, that's**
13 **benzo plus azoxy. Okay?**

14 Q. Yes.

15 **A. So I've got all those -- so why go into**
16 **all of those treatments. Okay? And then I've got**
17 **other treatments. I've got not only those**
18 **treatments that I'm going to put mancozeb with,**
19 **I've got other treatments.**

20 Q. Uh-huh.

21 **A. So in my sprayer I'm going to go back --**
22 **it's easier for me to go back and just take another**

1 **bottle -- these are CO2 sprayers. Okay?**

2 Q. Right.

3 A. So I've got those treatments and then any
4 other treatment is going to have an associated
5 treatment, mancozeb, I'll do all of those. Then if
6 I've got an associated treatment with copper
7 oxychloride, I'll go back and do that. It's simply
8 changing spray bottles and how many spray bottles
9 do I have to make up. Okay? That's what I'm
10 relating to.

11 Q. Okay. So you're focusing on the
12 preparations --

13 A. The preparation and actually accomplishing
14 the field experiment.

15 MR. FELDSTEIN: Doctor, you have to let
16 him finish the question.

17 THE WITNESS: All right.

18 Q. But in terms of application, you've got to
19 go over any given area twice for sequential,
20 correct?

21 A. The given number of steps would be double,
22 yes.

1 Q. Okay. And I'm just trying to understand
2 what you're describing here. So, for example, the
3 treatment area for azoxy -- I'm going to use
4 shorthand -- azoxy plus benzo plus mancozeb, for
5 that particular area you're going to go over that
6 area twice?

7 **A. That specific area, yes.**

8 Q. Okay. Whereas for that specific area if
9 you were doing a tank mix you would only cover the
10 area once; is that correct?

11 **A. That's correct if that was the only**
12 **treatment that we were considering.**

13 Q. Okay. Well, let's expand that out. So
14 we've got in Godoy 22 different treatment areas,
15 right?

16 **A. That is correct.**

17 Q. Two of them don't involve mancozeb,
18 correct?

19 MR. FELDSTEIN: Objection, misstates.

20 MR. CARSON: I'm sorry. Strike that.

21 Two of them involve a single spray under
22 your reading of Godoy, fair?

1 **A. No, I disagree. There's one that requires**
2 **copper oxychloride, another one is chlorothalonil,**
3 **another is propineb, another one is fluazam.**

4 Q. Okay. I think we're speaking past each
5 other. Let me try to ask a clearer question.

6 As disclosed in Godoy, there are 20
7 treatment areas --

8 **A. There are 23 treatment areas.**

9 Q. I didn't finish my question. I know
10 there's 23 total.

11 **A. Okay.**

12 Q. There's 20 treatment areas that include
13 three active ingredients, correct?

14 **A. I believe that's the correct number.**

15 Q. Okay. So focusing on those 20 treatment
16 areas as opposed to the other three -- you said
17 there's 23 total, right?

18 **A. Yes.**

19 Q. Those 20, with a sequential application
20 each of those 20 would have to be sprayed twice
21 under your reading of Godoy, right? Correct?

22 **A. Yes.**

1 Q. Whereas with a tank mix each of those 20
2 areas would only be sprayed once, correct?

3 **A. That is correct.**

4 Q. Okay. Let's go to paragraph 128.

5 **A. Of which document?**

6 Q. So we're switching gears here. I don't
7 know when you would like to break for lunch. It's
8 12 -- a little past 12:30. We can do that now.

9 **A. It's your deposition.**

10 MR. FELDSTEIN: You're actually the guest
11 of honor, Barry.

12 THE WITNESS: I don't really care.

13 MR. CARSON: Why don't we break for lunch
14 now since it's 12:30 and come back. So we can go
15 off the record.

16 (Whereupon, at 12:36 p.m., the
17 deposition was recessed, to
18 reconvene at 1:10 p.m., this
19 same day.)

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AFTERNOON SESSION

8

(1:17 p.m.)

9

BARRY J. JACOBSEN, Ph.D.,

10 the witness at the time of recess, having been
11 previously duly sworn, was further examined and
12 testified as follows:

13

EXAMINATION

14

(Resumed)

15

BY MR. CARSON:

16

Q. So welcome back, Dr. Jacobsen.

17

18 I believe I had directed you right before
19 the lunch break to paragraph 128 and '9 of your
20 declaration.

21

A. Okay. I'm on paragraph 128.

22

Q. Okay. And you reference here -- or you
cite here Exhibit 2022?

1 **A. That's correct.**

2 Q. And how do you pronounce that reference?

3 **A. I'm just going to say Wojdyla. I don't**

4 **know. It's Polish and I can't pronounce it.**

5 THE REPORTER: Can you spell it.

6 THE WITNESS: W-O-J-D-Y-L-A.

7 Q. So can we just call it Wojdyla?

8 **A. Wojdyla's fine.**

9 Q. That work for you? Okay.

10 Now, Wojdyla -- you've read Wojdyla, I
11 take it?

12 **A. I've read the 215 reference, yes.**

13 Q. Well, Exhibit 2022?

14 **A. Exhibit 2022 is the 205 reference by**
15 **him.**

16 Q. Okay.

17 It's not -- what's in my declaration is
18 from the 215 paper.

19 Q. Okay. Was that produced in this case?

20 MR. CARSON: I guess I'm directing that to
21 you.

22 MR. FELDSTEIN: We think we had a -- we

1 realized recently that there was a mistake in that
2 the 2005 publication got inserted as Exhibit 2022
3 instead of the 2015 that's quoted in the
4 declaration.

5 MR. CARSON: Okay. So there's not an
6 exhibit in the case for Wojdyla 2015 as quoted in
7 the declaration; is that fair?

8 MR. FELDSTEIN: The table is reproduced
9 from the reference, but the reference itself is not
10 an exhibit.

11 BY MR. CARSON:

12 Q. So the only Wojdyla reference you reviewed
13 is the one published in 2015, which has not been
14 produced in this case, correct?

15 A. That is correct.

16 Q. Okay.

17 MR. FELDSTEIN: And we're happy to make it
18 available. We just realized this recently.

19 Q. So the Wojdyla reference that this table
20 comes from --

21 A. Yes.

22 Q. I'm referring to the table on page 42 of

1 your declaration --

2 **A. That is correct.**

3 Q. -- that involves -- correct me if I'm
4 wrong, based on the table anyway, that involves the
5 control of powdery mildew on rose bushes; is that
6 right?

7 **A. That is correct.**

8 Q. Okay. It doesn't address rust, correct?

9 **A. It doesn't address sprouts?**

10 Q. Rust.

11 **A. Oh, rust. No.**

12 Q. Or soybeans?

13 **A. No. It's simply demonstrating the**
14 **fungicidal activity of plant oils and mineral oils**
15 **on the powdery mildew fungus.**

16 Q. In rose?

17 **A. Yes, in rose.**

18 Q. Okay. What is powdery mildew?

19 **A. Powdery mildew is a fungus that, like**
20 **rust, is an obligate parasite. It's the white**
21 **powdery stuff that you see on roses quite often or**
22 **apple leaves. You see it on a lot of different --**

1 **lilacs. It's a very common disease.**

2 Q. Where does it attack the plant?

3 A. Like rust, it has a spore that lands on
4 **the leaf surface, germinates, and then moves as**
5 **mycelial growth living as an obligate parasite**
6 **inside of the plant leaf.**

7 Q. And in your view the Wojdyla reference
8 shows that mineral oil can control powdery mildew;
9 is that your reading of the reference?

10 A. It demonstrates that mineral oils and even
11 **some plant oils will provide the control of powdery**
12 **mildew, yes.**

13 Q. How does it control powdery mildew?

14 A. That's a very good question. There is
15 **some thought that it interferes with the infection**
16 **process. There's some thought that maybe there's**
17 **some components of the oil that might act directly**
18 **as a fungicide. Some of the most recent literature**
19 **suggests that the mineral oils induce resistance in**
20 **the plant. In other words, the plant reacts to the**
21 **mineral oil by saying I have to defend myself, and**
22 **it's the plant defenses that are actually**

1 **controlling the mineral oil. Probably in most**
2 **cases there's no single mode of action, it's**
3 **probably some combination thereof. In the**
4 **literature you can find all three opportunities.**

5 Q. Okay. So you -- it's kind of unclear how
6 it controls powdery mildew; is that fair?

7 **A. That's correct.**

8 Q. In paragraph 125 you refer to -- I mean
9 128. I apologize.

10 **A. 128?**

11 Q. Yeah. I misspoke.

12 **A. Okay.**

13 Q. You're referring here to the concentration
14 of mineral oil that was used in Wojdyla; is that
15 what you're representing?

16 **A. That is correct, yes.**

17 Q. Do you know the application rate at which
18 the oil was applied?

19 **A. In this reference?**

20 Q. Yes.

21 **A. It specifically states it.**

22 Q. Where does it state it?

1 **A. It says concentration percent in**
2 **table 2.**

3 Q. Uh-huh.

4 **A. 0.2 -- .25 all the way up to they show**
5 **concentration as high as 2 percent.**

6 Q. That's the concentration of the mineral
7 oil in the application that's sprayed, correct?

8 **A. In the total spray, yes.**

9 Q. Okay. But do you know how much mineral
10 oil is actually getting applied to the plant?

11 **A. I'm going to do the simple math. If it's**
12 **a 2 percent concentration, it would be 2 percent**
13 **mineral oil and 98 percent other carrier.**

14 Q. Okay, but if I have a vial of liquid that
15 has 2 percent mineral oil --

16 Right?

17 **A. Yes.**

18 Q. -- and 98 percent something else --

19 **A. Yes.**

20 Q. -- I can either put a single drop on the
21 leaf from that vial or I can dump the entire vial
22 on the leaf, right?

1 **A. What this gentleman --**

2 **Q. Is that correct?**

3 **A. Yes.**

4 **Q. Okay. So do you know the dosage or the**
5 **application rate of the mineral oil in Wojdyla?**

6 **A. In Wojdyla he sprayed the leaves top and**
7 **bottom with the .25 up to 2 percent oil. So he**
8 **doesn't specify what size droplets, he talked about**
9 **how much he used, et cetera. It wasn't a single**
10 **drop on a single leaf, no. It was a spray**
11 **application.**

12 **Q. Yeah. What I'm looking for is the actual**
13 **dosage.**

14 **A. Okay.**

15 **Q. Do you know that?**

16 **A. Each droplet of the spray application if**
17 **it said .25 -- or 0.25, that's what it was.**

18 **Q. But in terms of, say, for example, liters**
19 **per hectare, do you -- does Wojdyla say, do you**
20 **know what that application rate was?**

21 **A. In the paper it gives it.**

22 **Q. Okay. Is it reflected here in your**

1 report?

2 **A. No, but it's reflected in the paper.**

3 Q. Okay.

4 **A. I only took out table 2 to illustrate my**
5 **point.**

6 Q. But I mean, if you're going to compare two
7 different applications of mineral oil, for example,
8 to each other, don't you need to know the
9 application rate in addition to the concentration?

10 MR. FELDSTEIN: Object to form, incomplete
11 hypothetical.

12 **A. The answer is yes.**

13 Q. Do you know how -- so when I say
14 "application rate," are we on the same page as to
15 what I'm referring to?

16 **A. If you're talking about how many liters of**
17 **X mix is applied to a hectare, that would be -- the**
18 **application rate could be that or the application**
19 **rate could be what amount of active ingredient is**
20 **added per hectare. Okay.**

21 Q. Okay. But you need a per-area
22 measurement?

1 **A. Yes.**

2 Q. Okay. So to compare -- again, to compare
3 two different applications of mineral oil against
4 each other you would need to know both the
5 application rate and the concentration?

6 **A. Yes.**

7 MR. FELDSTEIN: Let him finish the
8 question and give me a second to object to form and
9 incomplete hypothetical.

10 Q. Okay. I think we got a question and
11 answer there. Okay.

12 Now, in your declaration here, your
13 discussion of Wojdyla, you do not indicate in here
14 what the application rate was, do you?

15 **A. No. Had you been supplied the correct**
16 **exhibit, you would have that.**

17 Q. Well, I'm asking you if you discuss it.
18 You had the correct exhibit, correct?

19 **A. Yes.**

20 Q. And did you discuss the application rate
21 in your declaration?

22 **A. Yes.**

1 Q. Where does it say what the application
2 rate for Wojdyla is?

3 A. In table 2.

4 Q. Okay. Where?

5 A. The concentration percent.

6 Q. That's the concentration --

7 A. Of the spray or the concentra- -- if we
8 did a hundred liters per hectare, it would be 0.25
9 up to 2 percent mineral oil looking at table 2.

10 Q. Okay. If we did a hundred liters per
11 hectare?

12 A. Well, if we did 1 liter per hectare.

13 Q. What did they do in Wojdyla?

14 A. I don't remember. He uses a term D, as in
15 dog, per meter squared. And I'm not quite sure
16 what that meant, but he describes it.

17 Q. Okay. But the question I asked was you
18 don't -- you testified a few minutes ago that you
19 would need both the application rate and the
20 concentration to do a comparison?

21 A. Yes.

22 Q. And I'm just asking you to confirm that in

1 your declaration here you do not address the
2 application rate in Wojdyla?

3 **A. That is correct.**

4 Q. And sitting here today, you don't know
5 what the application rate in Wojdyla was?

6 **A. Do I have it in my memory, no, but if I**
7 **had the reference in front of me I could point it**
8 **to you.**

9 Q. Yeah. But you don't -- you don't know
10 right now? I mean, you don't remember what it
11 was?

12 **A. I don't remember specifically, no.**

13 Q. If you ever knew?

14 **A. I did know because I read this paper.**

15 THE REPORTER: I didn't get your
16 objection.

17 MR. FELDSTEIN: I objected to form,
18 misstates the testimony.

19 Q. And in your discussion here in your report
20 you don't compare the application rate of mineral
21 oil in Wojdyla to the application rate of Nimbus in
22 Godoy, do you?

1 **A. Directly, no, although --**

2 Q. Let's assume that you've got two
3 applications -- two treatments -- strike that --
4 two treatments. One has an application rate that's
5 a hundred times the application rate in the other.

6 **A. Okay.**

7 Q. Would that possibly make a difference on
8 the effect of the compound being applied?

9 MR. FELDSTEIN: Object to form, incomplete
10 hypothetical.

11 **A. I can think of extreme comparisons where**
12 **it would make a difference.**

13 Q. Well, I'm asking about a specific
14 comparison, an application rate that's a hundred
15 times what the other treatment is.

16 MR. FELDSTEIN: Same objections.

17 **A. I'm not sure if a hundred fold would do**
18 **it. A thousand fold might do it.**

19 Q. A hundred could?

20 **A. Possible.**

21 Q. Okay. What about ten times, could it?

22 MR. FELDSTEIN: Object to form, incomplete

1 hypothetical.

2 **A. It could, but not likely.**

3 Q. Okay. But it could?

4 MR. FELDSTEIN: Objection, asked and

5 answered.

6 THE REPORTER: I don't remember an answer.

7 **A. I've already answered that question.**

8 Q. He nodded. So I take it your answer is
9 yes, it could?

10 **A. The first time you asked the question I**
11 **answered it.**

12 Q. I said it could, yes or no?

13 **A. And I agreed. I said yes, it could.**

14 Q. Can you tell me what an adjuvant is?

15 **A. Adjuvant could be something that we add to**
16 **spray mixtures to reduce surface tension, allow**
17 **emulsifiable concentrates to disperse in water or**
18 **whatever carrier you're using. So an adjuvant**
19 **could be many different things. It's used for**
20 **specific purposes.**

21 Q. And --

22 **A. It could be a dispersant, many things.**

1 Q. And in your answer to my question as to
2 what an adjuvant is you used the term "carrier"; is
3 that right?

4 A. No. It's something added to the water
5 carrier. If we're mixing a solution of an active
6 ingredient, say a fungicide, with water, we might
7 add an adjuvant that is a surfactant, a dispersant,
8 something that would allow if the fungicide was an
9 emulsifiable concentrate to mix better with water.
10 So the term "adjuvant" is a generic term. It could
11 have many specific meanings.

12 Q. So does it -- could it include a carrier?

13 A. An adjuvant rarely is a hundred percent of
14 whatever the adjuvant is.

15 Q. Okay. Have you ever used mineral oil in
16 your research --

17 A. Yes.

18 Q. -- as an adjuvant?

19 MR. FELDSTEIN: Let him finish the
20 question, okay?

21 A. As an adjuvant, no.

22 Q. Have you ever used it as a carrier?

1 **A. Yes.**

2 Q. Okay. And in your mind what is the
3 difference in this context between an adjuvant and
4 a carrier?

5 **A. In my research I've used mineral oil at**
6 **various concentrations for control of stylet-borne**
7 **viruses in potatoes.**

8 Q. Okay. And in that example why do you not
9 consider mineral oil to be an adjuvant?

10 **A. In this case the oil is the active**
11 **ingredient. We added an emulsifying agent so that**
12 **we could mix it with water and spray it on potato**
13 **plants.**

14 Q. So in that example the carrier is water,
15 correct?

16 **A. In that example, yes.**

17 Q. Okay. And the mineral oil is the active
18 ingredient?

19 **A. Yes.**

20 Q. The question I asked you is whether you'd
21 ever used mineral oil as a carrier.

22 **A. I have not used mineral oil as a pure**

1 **carrier, no. I've done mixtures of fungicides with**
2 **mineral oil added to water, yes.**

3 Q. But you do have a patent, right, that
4 describes mineral oil as a carrier? And if you
5 don't remember, that's fine. I can show it to you.

6 A. I do. I've got a number of different
7 **patents.**

8 Q. Why don't we just mark it and we'll look
9 at it. Okay. We don't need to -- this doesn't
10 need to be a guessing game here. So I think I'm
11 going to ask this be marked as Exhibit 1040.

12 (Syngenta Exhibit 1040 was
13 marked for identification.)

14 BY MR. CARSON:

15 Q. Is this your patent, Dr. Jacobsen?

16 A. Yes.

17 Q. And do you recall the specifics of this?
18 I'm not asking you what they are, just whether you
19 recall.

20 A. I remember writing this patent, and I
21 **remember it being submitted and being accepted.**

22 Q. And you're the sole inventor?

1 **A. I'm listed as the sole inventor. I**
2 **actually share the revenues with a person that**
3 **was -- another Ph.D. named Rebecca Bargabus,**
4 **B-A-R-G-A-B-U-S, and Nina Zidak, Z-I-D-A-K. They**
5 **were integral to the work, but I am the inventor.**

6 **Q. So I want to ask you about some statements**
7 **in column 37.**

8 **A. Column 37?**

9 **Q. Yes, sir. When you get there I'll provide**
10 **some line numbers. Just let me know.**

11 **A. I'm on column 37.**

12 **Q. Okay. So I'm looking at the paragraph**
13 **that starts at line 14 and runs through line 32.**
14 **Do you see that paragraph?**

15 **A. Yes.**

16 **Q. And in this paragraph you describe mineral**
17 **oil as being a useful carrier and as being inert;**
18 **is that fair?**

19 **MR. FELDSTEIN: Objection, misstates the**
20 **reference.**

21 **A. Let me read it.**

22 **Okay. What this paragraph is describing**

1 **is the formulation of the bacillus product. So now**
2 **you --**

3 Q. Are you not done? Are you done?

4 **A. That's my statement.**

5 Q. Okay. That's a statement. I appreciate
6 that. What I'm looking for, though, is an answer
7 to my question, which is whether you describe
8 mineral oil in this paragraph as being a useful
9 inert carrier.

10 **A. Yes. In the formulation of the bacillus**
11 **product, yes.**

12 Q. Okay. What do you mean by "the bacillus
13 product"?

14 **A. What's sold to the farmer.**

15 Q. You used the term "bacillus." What is
16 that?

17 **A. The specific bacillus is Bacillus**
18 **mojavensis, a specific isolate, and bacilli are**
19 **characterized -- they're bacteria -- they're**
20 **gram-positive bacteria, all of them have an**
21 **endospore, which is an extremely durable thing.**

22 Q. So in that particular context, what plants

1 would it be used on, what type of plants?

2 **A. We've used this -- I think this product is**
3 **registered right now on 29 different crops in the**
4 **United States.**

5 Q. Do those include soybean?

6 **A. Yes, I believe it does.**

7 Q. So in this particular application here, in
8 this context --

9 **A. Yes.**

10 Q. -- mineral oil would be an inert carrier?

11 MR. FELDSTEIN: Object to form.

12 **A. Mineral oil in this context is used in the**
13 **formulation of a product that is then going to be**
14 **mixed with water to be applied to crops by the**
15 **farmer, but this is representing the formulation of**
16 **the product that is sold to the farmer before he**
17 **dilutes it for spraying.**

18 Q. Okay. And in that formulation mineral oil
19 is an inert carrier?

20 MR. FELDSTEIN: Object to form.

21 **A. You could say that, yes.**

22 Q. Well, is that what you're saying here?

1 A. I'm having trouble with the term
2 "carrier." Here I'm talking about developing
3 formulations. This says carriers, in other words,
4 what I'm going to put the bacillus in in a product.
5 Okay?

6 Yes.

7 Q. The answer to my question is yes?

8 A. Yes.

9 Q. Okay.

10 Now, if we go to column 13, line 7.

11 A. Column 13, line 7, yes. Yep.

12 Q. You provide -- and going through line 53
13 you provide a definition of how you use the term
14 "fungicide" in this document; is that fair?

15 A. That's what this section appears to -- I
16 haven't read it for years, but that's what it seems
17 to say, yes.

18 Q. Okay. So what you've got here is a list
19 of fungicides?

20 A. Yes.

21 Q. Do you include mineral oil in this list?

22 A. I'm going to have to read it because I

1 **don't remember. This was written quite a long time**
2 **ago.**

3 **I'm only going down through line 53?**

4 Q. If that's where your list of fungicides
5 ends, yes.

6 A. I see other oils here. I do not see
7 mineral oil. If it's there, if you could point it
8 out to me, I'd appreciate it.

9 Q. I don't see it.

10 A. Okay.

11 Q. I guess you agree that you don't see it
12 either?

13 A. That's correct.

14 Q. Okay.

15 All right. If we could mark as
16 Exhibit 1041. Your copy is coming.

17 MR. FELDSTEIN: Thank you. 1041?

18 MR. CARSON: Yes, sir.

19 (Syngenta Exhibit 1041 was
20 marked for identification.)

21 BY MR. CARSON:

22 Q. Dr. Jacobsen, have you seen this document

1 before?

2 **A. No, I have not.**

3 Q. Would you agree with me that this
4 document, at least in part, involves the
5 application of fungicides?

6 MR. FELDSTEIN: Object to foundation.

7 MR. CARSON: If you need to review it, let
8 me know.

9 **A. I have not read it.**

10 Q. You might take a look at paragraph 40 --
11 I'm sorry -- paragraph 36. Are you there?

12 **A. Paragraph 36 it mentions fungicides and**
13 **some specific fungicides, yes.**

14 Q. Okay. And if you take a look at
15 paragraph 8. Are you there?

16 **A. Yes, I see the paragraph 8.**

17 Q. Paragraph 8 mentions Nimbus and describes
18 it as a "Commercially available tank mix adjuvant";
19 do you see that?

20 **A. Yes, I see that.**

21 Q. It also describes Nimbus as a mineral oil;
22 do you see that?

1 **A. Yes.**

2 Q. Okay. And if we could go to example 4 in
3 this patent which starts at paragraph 66.

4 **A. Paragraph 4 --**

5 Q. No. It's example 4, paragraph 66.

6 **A. Yes.**

7 Q. And take a look at example 4, but my
8 question is whether it describes a treatment that
9 involves a fungicide cyproconazole, correct?

10 **A. Yes, cyproconazole.**

11 Q. Okay. And this example included the
12 Nimbus adjuvant that's described earlier on that we
13 looked at, correct?

14 **A. Yes.**

15 MR. FELDSTEIN: Object to foundation.
16 Give me a second, Barry, please.

17 Q. And here Nimbus was applied as an adjuvant
18 at a rate of 600 milliliters per hectare; is that
19 right?

20 MR. FELDSTEIN: Object to foundation.

21 MR. CARSON: Do you see that in
22 paragraph 67?

1 **A. Yes, all treatments included Nimbus**
2 **trademark at a rate of 600 milliliters per**
3 **hectare.**

4 Q. And 600 milliliters per hectare, is that
5 equivalent to .6 liters per hectare?

6 **A. Yes.**

7 Q. That's the same rate at which Nimbus was
8 used in Godoy, correct?

9 MR. FELDSTEIN: Objection, foundation.

10 MR. CARSON: If you recall.

11 **A. Yes.**

12 **(Syngenta Exhibit 1042 was**
13 **marked for identification.)**

14 BY MR. CARSON:

15 Q. Okay. Let's mark as Exhibit 1042 this
16 document. Dr. Jacobsen, have you seen this
17 document?

18 **A. No, I have not.**

19 Q. If you look at paragraph 33.

20 **A. Paragraph 33. Yes.**

21 Q. Do you see -- just above that is what I
22 wanted to focus on, the header that says "Detailed

1 method descriptions."

2 **A. Yes.**

3 Q. And then if we go to the next page, it
4 provides a series of examples that involve the
5 application of fungicides to treat rust in wheat.
6 Am I reading that correctly?

7 **A. Starting at paragraph 37, yes.**

8 Q. Okay. And paragraph 41 is one of those
9 treatments, correct?

10 MR. FELDSTEIN: Objection, foundation.

11 **A. Within paragraph 41 I assume these tables**
12 **are what you're referring to?**

13 Q. Yeah. Yes, I am.

14 **A. There are fungicides listed in those**
15 **tables. At least azoxystrobin is there.**

16 Q. Okay. And fungicides as described here
17 are applied to treat rust in wheat plants?

18 **A. That's correct.**

19 Q. Okay. And paragraph 41 discloses that
20 these treatments involved Nimbus as a commercial
21 adjuvant; is that fair?

22 MR. FELDSTEIN: Objection, foundation.

1 **A. It says "Nimbus commercial adjuvant and**
2 **methyl oleate are standard adjuvants for**
3 **comparison."**

4 Q. So the reference is describing Nimbus as a
5 commercial adjuvant; is that fair?

6 MR. FELDSTEIN: Objection, foundation.

7 **A. Yes.**

8 Q. And then if you look at tables 1 through
9 4, each of those tables show that Nimbus alone had
10 no fungicidal activity; is that correct?

11 MR. FELDSTEIN: Object to form.

12 **A. You're going to have to give me a chance**
13 **to look at it.**

14 Q. Take your time.

15 **A. Table 4 shows Nimbus alone has no effect.**
16 **Table 3 shows Nimbus has no effect. Table 2 is**
17 **continued on another page. Nimbus in table 2 shows**
18 **no effect. Nimbus in table 1 shows no effect.**

19 Q. Okay. Let's -- you can put that aside.

20 If we could go back to your declaration
21 and paragraph 120. Are you there?

22 **A. I'm there.**

1 Q. Okay. So here in this paragraph you cite
2 to a series of registrations and other documents --

3 A. Yes.

4 Q. -- from certain countries, correct?

5 A. Yes.

6 Q. And you're citing these to support your
7 suggestion that Nimbus might be a sulfur fungicide;
8 is that fair?

9 MR. FELDSTEIN: Objection, misstates the
10 declaration.

11 A. Yes.

12 Q. And the registrations and documents --
13 other documents that you cite in paragraph 108 are
14 from Australia, Spain, and Portugal, right?

15 A. Yes.

16 Q. Did you cite to any registrations from any
17 other countries other than those three?

18 A. That's what's in my declaration.

19 Q. And did you find these documents that are
20 cited in paragraph 120?

21 A. Yes.

22 Q. All of them?

1 **A. Yes.**

2 Q. So to the extent they were also cited in
3 UPL's preliminary response prior to you being
4 retained, that's just a coincidence?

5 MR. FELDSTEIN: Object to form.

6 **A. I looked at each one of those in**
7 **preparation for the declaration.**

8 Q. Yeah. My question wasn't whether you
9 looked at them. It's did you go out and find them.

10 **A. Yes. I wanted to make sure that they were**
11 **correct.**

12 Q. So they were provided to you before you
13 went looking for them?

14 **A. Yes, and I found -- I found other Nimbus**
15 **things that are not in the declaration.**

16 Q. What I'm focused on are the Nimbus
17 documents you cite in your declaration in
18 paragraph 120.

19 **A. Yes.**

20 Q. And so those were provided to you in the
21 first instance, correct?

22 **A. I believe so, yes.**

1 Q. Okay.

2 A. But I did check them.

3 Q. Checked them how?

4 A. I went on the Web and searched for them.

5 Q. Okay. Okay.

6 You understand that the experiments
7 described in Godoy were conducted in Brazil?

8 A. That is correct.

9 Q. And the Godoy paper was published in
10 Brazil?

11 A. That is correct.

12 Q. Did you search for any documentation with
13 respect to Nimbus in Brazil?

14 A. Yes.

15 Q. Did you find any registrations for Nimbus
16 in Brazil?

17 A. I found several things that were Nimbus.
18 They varied in terms of how much mineral oil was
19 there. I'm just trying to recollect back, but yes.

20 Q. So you did search for and find some
21 documents in Brazil that described Nimbus as being
22 mineral oil?

1 **A. Yes.**

2 Q. You don't cite any of those documents in
3 your declaration, do you?

4 **A. No, I do not.**

5 Q. If we could go to Exhibit 2030. Is this
6 a document you're familiar with?

7 **A. Yes.**

8 Q. All right. Can we turn to page 47 of 60,
9 looking at the legend at the bottom.

10 **A. Yes.**

11 Q. This particular entry for petroleum oils,
12 you've seen this before, right?

13 **A. Yes.**

14 Q. And you cite to this entry in your
15 declaration, correct?

16 **A. I believe I do, yes.**

17 Q. I just wanted to ask you some questions
18 about this particular entry. There's a mention
19 here of mineral oils; do you see that phrase in
20 there?

21 **A. Yes. "Refinement of crude mineral oils."**

22 Q. I'm sorry. What did you say?

1 **A. Under "Physical chemistry" it refers to**
2 **"Crude mineral oils."**

3 Q. Okay. I was looking above there actually
4 where it says "Other names."

5 **A. It says "Other names: mineral oils, white**
6 **oils, paraffin oils, adjuvant oils, spray oils."**

7 MR. FELDSTEIN: You have to let counsel
8 finish the question. Okay?

9 THE WITNESS: Okay.

10 Q. So are mineral oils examples of petroleum
11 oils?

12 **A. Are mineral oils examples of petroleum**
13 **oils?**

14 Q. And if that's a bad question, just let me
15 know and I'll think of a different one.

16 **A. Petroleum oils are a large genus.**

17 Q. Okay.

18 **A. And mineral oils are a smaller part of**
19 **that genus.**

20 Q. Okay. So mineral oils are petroleum oils?

21 **A. Well, you could say that, yes.**

22 Q. Well, I'm just trying to understand what

1 you're saying.

2 **A. Well --**

3 **Q. Go ahead.**

4 **A. Petroleum oils are everything. That could**
5 **be when raw crude oil is coming out of the ground**
6 **is a petroleum oil.**

7 **Q. Right.**

8 **A. It could be the motor oil that you use in**
9 **your car, it could be a highly refined mineral oil**
10 **that you use. I mean, they're different things.**

11 **Q. Okay. So I think -- so a mineral oil is a**
12 **type of petroleum oil?**

13 **A. Yes.**

14 **Q. I also see mentioned here -- and this is**
15 **in the physical chemistry section that you had gone**
16 **to, it says composition and then they consist**
17 **largely of aliphatic hydrocarbons; do you see**
18 **that?**

19 **A. Yes.**

20 **Q. What is an aliphatic hydrocarbon, if you**
21 **know?**

22 **A. I don't remember -- having taken organic**

1 **chemistry back in the late 1960s, I'd have to look**
2 **up the definition of aliphatic. Sitting here**
3 **today, I can't tell you.**

4 Q. That's fine. So is mineral oil a
5 petroleum aliphatic hydrocarbon?

6 A. Is mineral oil an aliphatic hydrocarbon?
7 **That's what this sentence says.**

8 Q. Do you have any reason to dispute that?

9 A. No.

10 Q. Are there different types of mineral oil?

11 A. There are different refinements of mineral
12 **oil.**

13 Q. What do you mean by that?

14 A. Well, as you distill them different
15 **fractions come off in the distillation process.**
16 **There's highly refined and there's crude.**

17 Q. I see. So any given mineral oil product
18 may not be the same as another mineral oil product,
19 fair?

20 A. That is correct.

21 Q. All right. If we could go to
22 paragraph 176.

1 **A. Of what document?**

2 Q. Of your -- I'm sorry -- your declaration.

3 So Exhibit 2020.

4 **A. 176.**

5 Q. Are you there?

6 **A. Yes.**

7 Q. And I'm actually focused on two paragraphs
8 here, 176 and 177. Review them if you need to. My
9 question is whether you drafted these two
10 paragraphs yourself.

11 **A. The answer to that would be these were**
12 **drafted in discussions with the counsel. I'm quite**
13 **certain that I used these words. Whether they had**
14 **given me materials that had this similar wording I**
15 **can't remember.**

16 Q. Okay. In both paragraphs you use the
17 phrase "I understand Dr. Brannen testified or
18 described"?

19 **A. That's correct.**

20 Q. What's the basis of that understanding?

21 **A. Well, I think that's a reasonable thing.**
22 **When you're reading somebody else's work or what**

1 **they've said, this is my understanding of what they**
2 **said. This is my understanding of what Dr. Brannen**
3 **testified to.**

4 Q. Okay. So that's -- that understanding is
5 based on your reading of his transcript?

6 A. **That's correct.**

7 Q. And that's why you chose that phrase "I
8 understand"?

9 A. **That's correct.**

10 Q. Does Mr. Brannen -- or Dr. Brannen
11 actually say what you describe him as saying in his
12 transcript?

13 A. **We would have to go back to Dr. Brannen's**
14 **transcript, but I believe this is accurately**
15 **reflecting Dr. Brannen's testimony.**

16 Q. Why wouldn't you just say, for example,
17 looking at paragraph 176 as explained above,
18 Dr. Brannen testified that? Why interject "I
19 understand"?

20 A. **Because it's my understanding.**

21 Q. So it's your interpretation of what he
22 said?

1 **A. Okay. Yes.**

2 Q. Okay. It's not a quote from his
3 transcript, right?

4 **A. No, but we could find quotes in his**
5 **transcript that indicate that, yes.**

6 Q. Okay. So this is your understanding of
7 what he said?

8 **A. That's correct.**

9 Q. Okay.

10 Did you choose the particular cites from
11 the transcript that are in 176 and in
12 paragraph 177?

13 **A. I think in discussions with counsel I**
14 **pointed out when we were in this topical area a**
15 **number of things that were in Dr. Brannen's**
16 **testimony, and it was decided these were probably**
17 **the most succinct things addressing mixing**
18 **fungicides.**

19 Q. Okay. So did you pick these particular
20 cites or did the attorney pick them?

21 **A. It was done together.**

22 Q. Okay. Do you stand by these particular

1 cites?

2 **A. Yes.**

3 Q. And you personally reviewed the language
4 cited here to confirm that it supports your
5 understanding of Dr. Brannen's testimony?

6 **A. That's my belief.**

7 Q. I'm asking you if you personally reviewed
8 them and confirmed --

9 **A. I would have --**

10 Q. I'm not asking you to do it now.

11 **A. Okay.**

12 Q. I'm asking at the time you wrote this did
13 you personally review those excerpts and confirm
14 that they support what you say they say, yes or no?

15 **A. This happened so long ago. Sitting here
16 today, I cannot recall Dr. Brannen's testimony in
17 enough detail to say with certainty yes.**

18 Q. Okay.

19 I want to switch gears here and I want to
20 ask you about the Colby reference which has been --
21 which is discussed in your declaration.

22 **A. Yes.**

1 Q. Were you familiar with Colby prior to this
2 case?

3 A. Yes.

4 Q. And had you ever read the Colby reference,
5 Exhibit 1012, before this case?

6 A. Yes.

7 Q. And I take it you've read it again -- or
8 I'm asking have you read it again since being
9 retained for this case?

10 A. Yes.

11 Q. Have you ever taught it while you were a
12 professor?

13 A. I did not teach it.

14 Q. Have you ever --

15 A. Let me qualify that. In working with a
16 graduate student, if working with a graduate
17 student and telling them how you might -- an
18 individual graduate student how you might look at
19 synergy, that graduate student and myself discussed
20 Colby as well as a number of other methods of
21 looking at synergy.

22 Q. And when was that?

1 A. This was back when we were working on BmJ
2 and we were trying to figure out what was -- how we
3 could separate out the inducement of the resistance
4 to -- that we were using for controlling
5 stylet-borne viruses in potatoes, how we could
6 separate out the effects of the Bacillus mojavensis
7 isolate J from induced resistance from mineral oil
8 because we knew in the literature they were
9 reporting that mineral oil induced resistance. And
10 so we were applying -- co-applying mineral oil and
11 Bac J, Bacillus mojavensis isolate J, just call it
12 Bac J, together for control stylet-borne viruses in
13 potatoes, and I was trying to find out did we have
14 additive effects, synergistic effects, or negative
15 effects and that -- and I was working with a
16 particular graduate student in that regard.

17 Q. So my question was when that was. You
18 said BmJ. What is that?

19 A. Well, back when we were working on
20 Bac J -- BmJ or Bac J are the same thing.

21 Q. Okay. So when was that?

22 A. Let's see. The patent was -- where's my

1 **patent? The patent was finally issued in 2013.**

2 **I'm going to guess 2009, 2011.**

3 Q. So did you use Colby in that example?

4 A. No.

5 Q. Have you ever used Colby apart from work
6 in this case?

7 A. No, I've not used Colby apart from this
8 case. Colby was inappropriate to use in what I was
9 trying to study because you had an overlapping mode
10 of action.

11 Q. I'm just asking you if you've ever used
12 it.

13 A. I'm just simply giving you a full answer.
14 Thank you.

15 Q. Have you ever peer reviewed an article
16 where it was used?

17 A. I can't remember. I've peer reviewed
18 thousands of articles and I can't remember.

19 Q. So can you -- are you able sitting here to
20 describe for me the Colby formula and what it's
21 used for?

22 A. The Colby formula as described by a wheat

1 scientist and he was looking to determine if you
2 had two compounds if they were producing negative
3 interactions or synergistic or positive
4 interactions and looking for a method that might
5 actually give a quantitation to that degree of
6 negative or positive interactions.

7 So that's what the original Colby paper
8 talks about. It was looking at herbicides, all of
9 which had separate modes of action in his original
10 paper, and that's what it's about.

11 Q. So the paper refers to expected results,
12 correct?

13 A. Yes.

14 Q. What are expected results?

15 A. He was looking at the performance of
16 compound A -- I'll just say compound A added to
17 compound B. If we look at the degree of control, I
18 think he used dandelions and he had something else
19 in the paper. He had several weeds. The degree of
20 percent control because he got it to percent
21 control. So if you looked at how the compounds
22 acted alone, what was the prediction of when you

1 put them together. And then he also had in there
2 what he observed when he did use the mixture.
3 Okay?

4 And the Colby ratio is if you divide the
5 observed percent control of the combination from
6 the observed -- or the expected control from the
7 combination as a mathematical equation, and that
8 ratio, he stated if it was greater than 1 you would
9 have synergy. If it was less than 1, he decided it
10 was not synergy.

11 Q. Okay. Does he use the phrase "additive"?

12 MR. FELDSTEIN: Objection, foundation.

13 A. I don't have -- he might use the word
14 additive in his paper, but the paper is can you
15 predict synergy. You know, he talks -- I believe
16 he does use the word "additive" in his paper.

17 Q. So what is -- but what are -- my original
18 question was like what does expected results refer
19 to?

20 A. That's using the Colby formulas taking the
21 percent control of compound A, percent control of
22 compound B, making the multiplication, and then

1 **doing a division to give a single number that**
2 **eventually you're going to multiply by a hundred to**
3 **get a percent --**

4 Q. Okay.

5 A. -- and then use that from the observed
6 **control of percent control divided by the Colby**
7 **percent -- expected percent control that you**
8 **develop from the equation.**

9 Q. Why does he use the term "expected"?

10 MR. FELDSTEIN: Objection, foundation.

11 A. **That's the term he chose to use.**

12 Q. Okay. So if you -- if you have compound A
13 and you measure a certain percent control and you
14 have compound B and you measure a percent control
15 associated with that, do you expect the combination
16 of those to have a greater percent control than
17 each of them individually, setting aside the
18 magnitude?

19 MR. FELDSTEIN: Objection, incomplete
20 hypothetical.

21 A. **No. They could interfere with each other,**
22 **and so you could have less control. They could**

1 **have no effect.**

2 Q. Well, less control would be unexpected,
3 right?

4 A. **No. That would be antagonism.**

5 Q. Okay, which is unexpected?

6 A. **No.**

7 MR. FELDSTEIN: Objection, incomplete
8 hypothetical.

9 THE WITNESS: No, that's not correct at
10 all.

11 Q. Well, if you take the percent control of
12 compound A and the percent control of compound B
13 and you plug those into the Colby formula to get an
14 expected combined result, that's going to be
15 greater than the two individually, correct?

16 A. **But you're going to also have the observed**
17 **control from compound A plus compound B. That's**
18 **part -- that's also part of the Colby set of**
19 **decisions.**

20 Q. Right. And you go to that later?

21 A. **Well, that becomes the numerator.**

22 Q. The ratio?

1 **A. Yeah. And the denominator is the**
2 **expected.**

3 Q. Okay. But I'm focused on before you get
4 to that, right, because you're going to get a Colby
5 expected value, right?

6 **A. Yes.**

7 Q. And then you're going to use that with the
8 observed combined value, right, to get your
9 ratio?

10 **A. That's correct.**

11 Q. But when you calculate the expected Colby
12 result --

13 **A. Yes.**

14 Q. -- that value will be higher than the
15 percent -- the observed control for each of the
16 individual components that you plugged into Colby,
17 correct?

18 **A. In the multiplication that number would be**
19 **higher, yes.**

20 Q. It will be higher?

21 **A. Yes.**

22 Q. And then the question is, well, where do

1 the observed results fall sort of below or above
2 that?

3 **A. That's correct.**

4 Q. Okay. I just wanted to understand that
5 one piece. So the Colby expected value is going to
6 be a higher number than the observed value for each
7 of the components that get plugged in?

8 MR. FELDSTEIN: Objection, incomplete
9 hypothetical.

10 **A. You're going to take -- the answer's yes.**

11 Q. Okay. And then you touched on this, but
12 how do you -- how does Colby differentiate between
13 what you refer to as antagonistic effects, additive
14 effects, and synergistic effects?

15 **A. Now, fundamentally Colby will identify**
16 **synergism and those are going to be at ratios**
17 **greater than 1. Okay? At less than 1 you could**
18 **actually end up with a negative number, you know,**
19 **but at less than 1 that could be showing some**
20 **additive effects, it could be showing antagonism.**
21 **So Colby is simply -- he describes synergism as**
22 **where you have a Colby ratio of greater than 1.**

1 Q. So 1 is the dividing line?

2 A. That's what he said.

3 Q. According to Colby. Okay.

4 So then above 1 is synergistic according
5 to Colby. Is everything below 1 antagonistic
6 according to Colby?

7 A. It could be -- it's something less than
8 synergistic.

9 Q. Okay.

10 A. By his definition of synergism.

11 Q. Right. Well, then, where would additive
12 effects fall in that range above and below 1?

13 A. I guess you'd have to make an informed
14 decision about -- looking at the situation. I
15 can't give you a precise number.

16 Q. Okay. But there's some range like right
17 in the middle that would just be purely additive,
18 right?

19 A. Yeah. Somewhere in there, yes.

20 Q. And are the additive effects expected?

21 MR. FELDSTEIN: Objection, incomplete
22 hypothetical.

1 **A. Are additive effects expected? That**
2 **depends on what compounds you're looking at.**

3 Q. Okay. So you can't sort of say
4 generically when I combine compound A with
5 compound B there's some range that I expect and I
6 won't be surprised by and there's some range that
7 would be surprising?

8 MR. FELDSTEIN: Objection, incomplete
9 hypothetical.

10 **A. I don't completely understand your**
11 **question, but I'm going to answer it with this**
12 **qualification.**

13 Q. Okay.

14 **A. I would need to have the data of how the**
15 **compounds worked on the organism in question, the**
16 **percent control alone, each of them alone, if**
17 **you're just having two components each of them**
18 **alone, okay, and then the actual control with each**
19 **of them combined to really answer your question.**
20 **That data I would have to have at a minimum.**

21 Q. Okay. Okay.

22 Let's go to your declaration and actually

1 it's footnote 5 which appears on page 87.

2 **A. Page 87 or --**

3 Q. Page 87 there's a footnote 5. Do you
4 recall this footnote?

5 **A. Yes, absolutely.**

6 Q. Okay. And so here you assert that a ratio
7 as low as 0.8 may reflect synergy; is that right?

8 **A. For combinations having overlapping modes
9 of action.**

10 Q. Okay.

11 **A. That's the full footnote 5.**

12 Q. Okay. So if in your view the modes of
13 action are overlapping, then in your view a
14 ratio -- a Colby ratio as low as .8 may reflect
15 synergy?

16 **A. That's correct.**

17 Q. Okay.

18 **A. That's my opinion.**

19 Q. Okay. What is that opinion based on?

20 **A. Well, if you go into the literature where
21 people have looked at -- where you have overlapping
22 modes of action, that's why they have done -- a lot**

1 of mathematicians and biologists and plant
2 pathologists have worked on this and said, you
3 know, actually Colby works very, very well where
4 you don't have overlapping modes of action. Colby
5 does not work where you have two compounds that
6 they might control in the same way. Okay? And
7 just fundamentally you can't kill something twice.
8 Okay?

9 I mean, that -- so there -- the
10 alternatives to Colby, what they do is you've first
11 got to decide on yourself what is -- what level of
12 control you're going to accept, and then you
13 develop dose-response curves and you have to use
14 those dose-response curves along with whatever
15 level of control you're going to accept, is it
16 70 percent, is it 50 percent, is it 90 percent,
17 okay, the effective constant. Those would be EC
18 numbers, EC50, E70, EC90.

19 And so it requires a lot of
20 experimentation to do this, and the most commonly
21 used method where you have overlapping modes of
22 action is a formula developed by Wadley and that's

1 the -- in the literature where you have overlapping
2 modes of action you should use something like
3 Wadley and there must be 20 permutations of that
4 that have been developed by different people. But
5 fundamentally that to really look at where you have
6 overlapping modes of action, do you, in fact, have
7 synergy, something that's more than just additive.

8 Q. So according to what you've just said, so
9 the scientific literature would say if there's
10 overlapping modes of action don't use Colby, use
11 Wadley?

12 MR. FELDSTEIN: Objection, misstates the
13 evidence -- the testimony.

14 MR. CARSON: Is that a fair summary of
15 what you just said?

16 A. Yes.

17 Q. Did you use Wadley here in your analysis?

18 A. We tried to. We couldn't develop the
19 dose-response curve. So we didn't.

20 Q. Okay. So you did not use Wadley here?

21 A. Well, we tried to.

22 Q. All I've got is the declaration you signed

1 and I don't see Wadley in here. So --

2 **A. No.**

3 Q. Okay. You did not use Wadley --

4 **A. In the declaration --**

5 Q. -- in the declaration?

6 **A. -- no, I did not.**

7 THE REPORTER: Guys.

8 Q. So is there any precedent in the
9 scientific literature when there's overlapping
10 modes of action for using Colby anyway and changing
11 the ratio from 1 to .8?

12 **A. In the literature it says that Colby --**
13 **the Colby formulation where you have overlapping**
14 **modes of action is going to overestimate the**
15 **required ratio that you're going to need, 1 or**
16 **above. It's going to overestimate that. So where**
17 **you have overlapping modes of action it's going to**
18 **be something less than 1. And they -- there's lots**
19 **of examples in the literature where they've done**
20 **Colby with a set of data, they've done Wadley with**
21 **a set of data to show that. Now, is there a**
22 **definitive number, .7, .8, .9, .95? No.**

1 Q. So do you cite in your declaration to any
2 references that support using Colby when there are
3 overlapping modes of action and choosing a ratio
4 less than 1 to apply?

5 A. In the examples where I took Syngenta's
6 data that was given to me and using the Colby
7 formula, I felt there was synergy and I so state --
8 I said conservatively a Colby ratio of .9 or above
9 I considered to be synergy because we do have
10 overlapping modes of action and that's just an
11 educated guess based on my life experiences and
12 working with many of these same fungicides.

13 Q. Okay. And you don't cite to any
14 references to support that, correct?

15 MR. FELDSTEIN-objection, misstates the
16 record.

17 A. I don't believe there are any specific
18 references that say that.

19 Q. Okay.

20 THE REPORTER: Can we take a quick break?

21 MR. CARSON: Yes, we can.

22 (A break was had.)

1 BY MR. CARSON:

2 Q. Dr. Jacobsen, I meant to ask you this
3 question earlier today. In your work on this case
4 have you had any conversations with anyone from
5 UPL?

6 A. No.

7 Q. So all of your conversations with others
8 relating to this case were attorneys at Finnegan?

9 A. That's correct.

10 Q. All right. Now, getting back to this
11 footnote 5 of your report. Do you still have that
12 in front of you? Okay.

13 MR. FELDSTEIN: What page is that?

14 MR. CARSON: Page 87.

15 So you testified earlier about overlapping
16 modes of action, and I just want to ask you. So in
17 your view using Colby is inappropriate when
18 determining the combined effects of mancozeb and
19 other fungicides such as ergosterol biosynthesis
20 inhibitors and quinone outside inhibitors, correct?

21 MR. FELDSTEIN: Objection, misstates the
22 testimony.

1 **A. Mancozeb, ergosterol biosynthesis**
2 **inhibitors, and QoI's all have effects on**
3 **metabolism and respiration.**

4 Q. So those effects are overlapping?

5 **A. That's correct.**

6 Q. So when evaluating data coming out of a
7 study involving those three fungicides, for
8 example, or fungicide types, in your view Colby
9 would be inappropriate?

10 MR. FELDSTEIN: Objection, misstates the
11 testimony.

12 **A. In my view Colby would -- if you used**
13 **Colby it's going to way overestimate what you need**
14 **as a threshold for synergy.**

15 Q. And so if you do use Colby for that group
16 of fungicides, using a threshold of 1 in your view
17 would be inappropriate?

18 **A. In my view a threshold of 1 would**
19 **definitely show synergy, but something less than 1**
20 **could also show synergy.**

21 Q. Would it or not?

22 **A. A Colby ratio of 1 would definitely show**

1 **synergy. A Colby ratio of something less than 1**
2 **could also show synergy.**

3 Q. Well, based on your analysis, you drew the
4 line at .9, right?

5 A. That was based on my experience and
6 knowing how these fungicides work and looking at
7 the large body of literature, I felt that that was
8 a reasonably conservative number to use. I could
9 have used something less and defended it.

10 Q. But at a minimum in your view it should
11 be .9?

12 A. I think that's a reasonably conservative
13 number, yes.

14 Q. And that's what you used for your
15 analysis?

16 MR. FELDSTEIN: Objection, misstates the
17 reference.

18 A. In my analysis of the Syngenta data I
19 considered .9 or above to indicate synergy.

20 Q. Okay.

21 So then if that's the threshold, is
22 anything below .9 antagonistic?

1 A. Not necessarily. .9 was what I felt was a
2 reasonably conservative compromise if we're going
3 to use the Colby formula.

4 Q. Okay. I'm just trying to understand in
5 your application here where you drew the line
6 between antagonistic effects, additive effects, and
7 synergistic effects.

8 A. I don't remember where I -- that I said
9 there was antagonistic effects. If we had to put a
10 number on it, I'm going to guess it would be
11 something less than .5.

12 Q. Okay. So less than .5 antagonistic?

13 A. Uh-huh.

14 Q. .5 to .9 additive?

15 A. It could be additive, yes.

16 Q. Above .9 synergistic?

17 A. That was my conservative estimate, yes.

18 Q. And those are the dividing lines that you
19 used in your analysis?

20 MR. FELDSTEIN: Objection, misstates the
21 testimony.

22 A. In my analysis and if you look at the data

1 **tables, I used .9 and above to indicate**
2 **synergism.**

3 Q. Just, for example, page 93, you used three
4 colors here, right?

5 **A. Yes.**

6 Q. Red, green, and yellow?

7 **A. That's correct.**

8 Q. And on page 95 you use three colors, red,
9 green and yellow?

10 **A. Yes.**

11 Q. Okay. What does yellow signify?

12 **A. Yellow indicates a number that could be**
13 **synergy but it was below the .9 ratio.**

14 Q. Okay. Red?

15 **A. Red is definitely there's not synergy**
16 **there.**

17 Q. Okay. So it's not necessarily
18 antagonistic, it's just not synergetic?

19 **A. That's correct.**

20 Q. Okay. So then what's the dividing line
21 between red and yellow numerically?

22 **A. .8.**

1 Q. And the dividing line between yellow and
2 green numerically?

3 **A. .9.**

4 Q. Okay.

5 So in your view anything between .8 and .9
6 would not be antagonistic, correct?

7 **A. Yes.**

8 Q. And anything above .9 also would not be
9 antagonistic, correct?

10 **A. Yes.**

11 Q. So I guess anything above .8 and then
12 below .8 might be?

13 **A. It's going to be something other than**
14 **synergy.**

15 Q. I see. Okay.

16 I want to take a look at a document we
17 haven't looked at yet today. This has been marked
18 in this proceeding as 1034.

19 MR. FELDSTEIN: This is marked but not
20 filed, right?

21 MR. CARSON: What do you mean by "filed"?

22 MR. FELDSTEIN: You didn't file it with

1 the PTAB.

2 MR. CARSON: I don't know the answer to
3 that. All I know is it's marked as 1034.

4 MR. FELDSTEIN: So I'm going to object to
5 Exhibit 1034.

6 (Syngenta Exhibit 1034 was
7 marked for identification.)

8 BY MR. CARSON:

9 Q. Dr. Jacobsen, is this a document that
10 looks familiar to you?

11 A. No.

12 Q. So I will represent to you that this is a
13 submission by UPL to the EP, the European Patent
14 Office, in support of a European patent application
15 that claims priority to the Oliveira patent
16 application at issue in this case, Exhibit 1007.

17 A. Okay.

18 Q. Do you follow that?

19 A. I believe so.

20 Q. Okay. And if we go to page 11 of 24.

21 A. 11 of 17 or 11 of 24? I don't have
22 anything that says --

1 Q. Do you have 1034?

2 MR. FELDSTEIN: Mine says something else.

3 A. I have 1034 and it only goes to page 17 of
4 17.

5 Q. Do you mind if you just hand me that real
6 quick. Let me confirm it's the same document I
7 have.

8 Okay. Sorry. I had the page numbers
9 wrong. Let me look at my notes here. Apologies.

10 If we could go to page 4 of 17. Are you
11 there?

12 A. Yes.

13 Q. Okay. So this is an "Annex" that UPL
14 submitted that provides what's called additional
15 experimental evidence; do you see that?

16 MR. FELDSTEIN: Objection, foundation.

17 A. That's what the title below "Annex" says,
18 yes.

19 Q. Okay. And do you see the reference in the
20 first paragraph to using Colby --

21 A. Yes.

22 Q. -- to test synergy?

1 **A. Yes.**

2 Q. And then as you thumb through this annex,
3 there's a series of numbered experiments, the data
4 of which are disclosed here; do you see that?

5 MR. FELDSTEIN: Objection, foundation.

6 **A. I see experiment 1 described on page 1 --**
7 **I guess page 2, rather, 3 through part of page 4.**
8 **Experiment 2 described on page 4, 5, and part of**
9 **page 6. Experiment 3, page 6, 7, part of page 8.**
10 **Experiment 5, part of page 8, 9 through part of 10.**
11 **Experiment 6, part of page 10 through part of**
12 **page 12. Experiment 7, page 12, 13 -- part of 13.**
13 **Experiment 8, page 13 and 14.**

14 Q. So let's just focus on experiment 5.

15 **A. Experiment No. 5?**

16 Q. 5, yes, which is -- it's page -- it starts
17 at page 8, which is also in the lower margin
18 page 11 of 17, right? Do you see that?

19 **A. Yes.**

20 Q. Okay. Experiment 5. And this discussion
21 of experiment 5 ends on page 10, correct?

22 MR. FELDSTEIN: Objection, foundation.

1 A. That's my interpretation, yes.

2 Q. Okay. Let's focus on the table that
3 appears on page 10, which is 11 of 17 -- I mean,
4 sorry, 13 of 17.

5 A. Yes. Okay.

6 Q. Can you tell from the description of
7 experiment 5 what fungicides were tested?

8 A. I'm not familiar with all these trade
9 names.

10 Q. Okay.

11 A. I believe Unizeb Gold is mancozeb. Here
12 it shows the active ingredients. Strides is methyl
13 soya. I'm assuming it's methylated soybean oil is
14 what I'm assuming. Picoxystrobin, I know what that
15 is. There's tebuconazole listed here. There's
16 methyl soya again, mancozeb. Okay. Yes, I know
17 the fungicides. Okay?

18 Q. Okay. And would you consider methyl soya
19 to be a fungicide?

20 A. I don't know. I'm not going to -- my
21 guess and knowledge of plant oils it might have --
22 not great fungicidal activity, but it might have

1 **some fungicidal activity.**

2 Q. But you don't know?

3 A. **I'm not aware of methylated soybean oil**
4 **being used as a fungicide. I'll just say that.**

5 Q. Okay. So experiment 5 involved mancozeb,
6 correct?

7 A. **Yes.**

8 Q. It involved a quinone outside inhibitor,
9 correct?

10 A. **Picoxystrobin, yes.**

11 Q. And it involved an ergosterol biosynthesis
12 inhibitor, correct?

13 A. **Ergosterol biosynthesis inhibitor.**

14 Q. Thank you.

15 A. **Tebuconazole.**

16 Q. Okay. So if we go back to page 10, the
17 table there, it's providing data for eight
18 sprays?

19 A. **Yes.**

20 Q. And under "Product," Unizeb Gold is
21 mancozeb, correct?

22 A. **Uh-huh.**

1 THE REPORTER: Yes?

2 THE WITNESS: Yes.

3 Q. Oranis is the picoxystrobin, correct?

4 A. Yes.

5 Q. And Tebufort, T-E-B-U-F-O-R-T, is
6 tebuconazole. What is Tebufort?

7 A. Tebuconazole.

8 Q. Tebuconazole. So this is an experimental
9 study, is it not, that involved mancozeb, a quinone
10 outside inhibitor, and an ergosterol biosynthesis
11 inhibitor mixed together, right?

12 MR. FELDSTEIN: Objection, foundation.

13 A. That would appear to be what we're looking
14 at, yes.

15 Q. Okay. And UPL in analyzing these results
16 used the Colby formula to test synergy for that
17 group of compounds, correct?

18 MR. FELDSTEIN: Objection, foundation.

19 A. I don't see anywhere in the description of
20 experiment No. 5 the Colby -- here it says -- the
21 column says "Colby predicted control."

22 Q. Right.

1 **A. That's Colby predicted or expected. You**
2 **could use --**

3 Q. So that's the Colby expected value?

4 MR. FELDSTEIN: Objection, foundation.

5 **A. That would be my interpretation, yes.**

6 Q. Okay. So the answer to my previous
7 question is that for these -- for compositions
8 involving these three compounds to analyze their
9 potential synergistic effects UPL used Colby,
10 correct?

11 MR. FELDSTEIN: Objection, foundation.

12 **A. It would appear to be so, yes.**

13 Q. And as reported here in this table, did
14 experiment 5 show any synergy?

15 MR. FELDSTEIN: Objection, foundation.

16 **A. If you take percent control observed**
17 **divided by the Colby expected or it says predicted**
18 **here -- this is my interpretation. So they were**
19 **dividing 53.3 divided by 44.7, which is going to**
20 **give you a Colby number greater than 1.**

21 Q. And UPL interpreted that result as being
22 synergistic?

1 MR. FELDSTEIN: Objection, foundation.

2 A. Colby formula says that if you have a
3 ratio greater than 1 there's synergism, and I'll
4 agree that if you have a Colby ratio greater than 1
5 it is synergism.

6 Q. I'm just asking you what's reported here
7 in this table, and if you look at the entry in the
8 lower right corner under 44.7 --

9 A. Yes.

10 Q. -- in parentheses it's described as
11 synergistic, correct?

12 A. And my interpretation of this table, we
13 could have had another column that actually said
14 Colby ratio and that's what you've got to get to is
15 the Colby ratio.

16 Q. Okay.

17 A. They're not showing that, but the Colby
18 ratio would be 53.3 divided by 44.7.

19 Q. Okay.

20 A. For treatment No. 7 it would be 26.7
21 divided by 36.2, which is going to give you
22 something less than 1.

1 Q. Okay. So let's stop there. So focusing
2 on spray 8 --

3 A. Yes.

4 Q. -- here's a challenging question for you.
5 Are you ready? What is 53.3 divided by 44.7?

6 A. You got a calculator?

7 Q. I do. I'm going to do this for you and
8 you can just let me know if you think it's wrong
9 because I'm not going to give you my phone. Okay.
10 53.3 divided by 44.7, I get 1.19.

11 A. Yes.

12 Q. Sound about right, the math?

13 A. I'm going to guess it's in that ballpark,
14 yeah.

15 Q. Okay. So if we were to create that column
16 that you'd like to see -- and, in fact, why don't
17 you just do that. I'll give you this pen.

18 A. Okay.

19 Q. And you can just write on that document.
20 I gave you a pen that doesn't work, which is why I
21 put it in the center of the table. Here, try that
22 one.

1 **A. Okay.**

2 Q. So you've labeled -- you've provided a
3 header there. What does that say?

4 **A. "Colby ratio."**

5 Q. Okay. And then we're going to fill in the
6 values below?

7 **A. Yes.**

8 Q. Okay. And at the very bottom we know
9 that's 1.19.

10 **A. Okay.**

11 Q. Okay. Now, how did you say we'd figure
12 the Colby ratio for spray 7?

13 **A. You divide 26.7 by 36.2.**

14 Q. Okay. And I will tell you that that is --
15 rounding up, is 0.74.

16 **A. Okay.**

17 Q. What about spray 6?

18 **A. 22.2 divided by 26.8.**

19 Q. Okay. That comes out, rounding up again,
20 as 0.83.

21 **A. Okay.**

22 Q. And then how would we calculate the Colby

1 ratio for spray 5?

2 **A. For spray 1 you can't.**

3 Q. No. Spray 5.

4 **A. Oh, spray 5. 31.1 divided by 34.5.**

5 Q. Okay. And that comes out to 0.90.

6 **A. Okay.**

7 Q. Okay. Thank you.

8 Okay. And UPL in creating these tables
9 has already provided a parenthetical for each Colby
10 expected value indicating their view as to whether
11 it's antagonistic or synergistic, correct?

12 MR. FELDSTEIN: Objection, foundation.

13 **A. That's what this table says.**

14 Q. Okay. And for spray 5, which is a Colby
15 ratio of .9 according to your calculation, UPL
16 describes that as antagonistic for this particular
17 group of fungicides, correct?

18 MR. FELDSTEIN: Objection, foundation.

19 **A. That's what the calculation would**
20 **indicate, yes.**

21 Q. And that's what the parenthetical on the
22 original document indicates as well, correct?

210

1 **A. That's what it says.**

2 Q. Okay. Spray 6, Colby ratio .83,
3 antagonistic, correct?

4 **A. Yes.**

5 Q. Spray 7, Colby ratio .74, also
6 antagonistic?

7 **A. Yes.**

8 Q. Okay.

9 So when UPL applied Colby to -- strike
10 that.

11 The fungicides that were tested in your
12 view have overlapping modes of action, correct?

13 **A. Yes.**

14 Q. As UPL applied Colby to those
15 combinations, a Colby ratio in their view of .9 was
16 antagonistic, not synergistic, correct?

17 MR. FELDSTEIN: Objection, foundation.

18 **A. That would appear to be their**
19 **decision-making, yes.**

20 Q. Okay.

21 So UPL applied Colby in a manner that's
22 inconsistent with the way you apply Colby?

1 MR. FELDSTEIN: Objection, foundation,
2 misstates the testimony.

3 A. They applied Colby by the traditional --
4 what Colby describes in its paper, a Colby ratio
5 greater than 1 indicating synergism. A Colby ratio
6 of less than that they claim -- or they use the
7 term antagonistic. I don't personally,
8 professionally think that's the right term to use,
9 but they say it's not synergism. So let's just say
10 antag- -- they interpret antagonism and not
11 synergism to be one and the same. So...

12 Q. If we go back to 1038, Exhibit 1038.

13 A. 1038 is?

14 Q. It's the big one.

15 A. The great big one?

16 Q. Yes, sir. Are you there? Okay. Thank
17 you. If we could go to page 70 of 728.

18 A. Page 70. Yes.

19 Q. Do you see the table there?

20 A. Yes.

21 Q. And that table actually starts at the
22 bottom of page 68, correct?

1 MR. FELDSTEIN: Objection, foundation.

2 A. That would be -- that is how I would
3 consider it, yes.

4 Q. Okay. And the lead-in to the table at
5 paragraph 44 references calculating synergy using
6 the Colby formula, correct?

7 A. That is correct.

8 Q. Okay. And just to orient you, this is the
9 De Oliveira declaration that we looked at earlier
10 today.

11 So if we go back to page 70, looking at,
12 for example, entry 10; do you see it?

13 A. Yep.

14 Q. That entry involves mancozeb with a QoI
15 and an ergosterol, correct?

16 A. Ergosterol, yes.

17 Q. Okay. Which in your view has overlapping
18 modes of action?

19 A. Not just in my view. I mean, it's well
20 known in the literature they overlap.

21 Q. Well, let's stop there for a second and go
22 back to your report. We'll come back to the table.

1 If you could go back to paragraph 244 of your
2 report. Are you there?

3 **A. Yes.**

4 Q. This is where you assert that these three
5 fungicidal types have overlapping modes of action,
6 correct, this paragraph?

7 **A. Yes.**

8 Q. And the overwhelming literature that you
9 just mentioned in your declaration consists of two
10 documents; is that correct?

11 MR. FELDSTEIN: Objection, misstates the
12 record.

13 **A. Consists of two -- 2060.**

14 Q. Okay. And?

15 **A. Where's the other document?**

16 Q. Looks like you cite to Exhibit 1011 on the
17 top of page 87.

18 **A. Oh, Exhibit 1011. I'm trying to remember**
19 **what that was.**

20 Q. My question, though, is you only cite to
21 two documents to support your view that those
22 fungicides have overlapping modes of action,

1 correct?

2 **A. Yes.**

3 Q. Okay. Can we look at Exhibit 2060. Can
4 you point to me what in this document supports your
5 view that there's overlapping modes of action?

6 **A. Okay. Well, let's get to the specific**
7 **fungicides, and we're going to discuss QoI's.**

8 Q. If you could let me know what page you're
9 on.

10 **A. Okay. Page 6 of 17.**

11 Q. Okay.

12 **A. Or 7 of 17 you could use there. Here you**
13 **have azoxystrobin that we're talking about. The**
14 **mode of action is the very first column,**
15 **respiration.**

16 Q. Okay.

17 **A. Then if we go to -- what other fungicide**
18 **do you want to look at? Do you want to look at**
19 **mancozeb?**

20 Q. Okay. So you're focusing on the
21 respiration aspect?

22 **A. Yes.**

1 Q. Okay. I understand.

2 All right. If we go back to Exhibit 1038.

3 A. **1038. Okay. Which page? Page 70 again**

4 **or --**

5 Q. Actually, I apologize. Going back to the
6 previous set of questions. So I'm looking at the
7 top of page 87 of your report.

8 A. **Yes.**

9 Q. And you state here that the SDHI and QoI
10 fungicides and mancozeb all inhibit fungal
11 respiration?

12 A. **That is correct.**

13 Q. That is your basis for opining that the
14 modes of action overlap, correct?

15 A. **That is correct.**

16 Q. How does mancozeb inhibit fungal
17 respiration?

18 A. **Mancozeb affects many different things in**
19 **fungi. It affects lipid biosynthesis. Do you want**
20 **me to answer the question?**

21 Q. I'm listening to you.

22 A. **It affects lipid biosynthesis, membrane**

1 formation, respiration, metabolism. I believe --
2 and I might be off by one or two and there may be
3 newer literature since I taught this, but I believe
4 there are documented 42 different sites in fungal
5 growth in respiration that mancozeb affects. Lipid
6 metabolism is a precise thing, but if you block
7 lipid metabolism you're going to block respiration.
8 Okay. So that's just mancozeb.

9 Q. So mancozeb -- if I'm oversimplifying let
10 me know. Mancozeb affects respiration by blocking
11 lipid metabolism?

12 A. Yes. Lipid biosynthesis I said.

13 Q. Okay.

14 A. It blocks a whole series of things in
15 respiration, which is part of -- respiration is
16 part of metabolism. It blocks -- there's a total
17 of about -- they haven't been described in the
18 literature -- 42 specific sites, all of which or
19 most of which would affect respiration in some way
20 or another.

21 Q. So then what about, for example, QoI
22 fungicides, how do they inhibit fungal respiration?

1 A. They actually block a specific enzyme in
2 the mitochondria. At mitochondria that's where
3 basically you have energy production. That's one
4 of the things that just came to mind. Mancozeb
5 blocks ATP, adenosine triphosphate. When you go
6 from ATP to ADP, adenosine diphosphate, you have a
7 release of energy and that's part of what
8 metabolism is about. Mancozeb does that. In the
9 case of the QoI's if you wanted to get -- you have
10 a very specific enzyme that it inhibits, but it
11 affects that energy transfer in the mitochondria.

12 Q. So the QoI inhibits respiration by
13 affecting a very specific enzyme?

14 A. That's correct.

15 Q. Does mancozeb affect that enzyme?

16 A. I can't tell you if it specifically
17 affects that enzyme, but it affects respiration.

18 Q. Okay, but not --

19 A. Both of them affect respiration.

20 Q. I'm not focused on the result. I'm trying
21 to figure out the mechanism by which they do that.

22 A. Okay.

1 Q. I think you testified the QoI affects a
2 specific enzyme and then mancozeb does something
3 else, not with respect to that enzyme, right?

4 MR. FELDSTEIN: Objection, misstates
5 testimony.

6 A. Mancozeb affects a broad range of
7 metabolic and respiratory activities in fungi.

8 Q. But not the same enzyme that the QoI
9 affects?

10 A. Not only that enzyme. I don't know if it
11 affects that enzyme, but mancozeb affects many,
12 many enzymes.

13 Q. I'm just focused on the one that QoI
14 affects.

15 A. I don't know sitting here today whether
16 mancozeb affects the same enzyme or not.

17 Q. Okay. That's my only question.

18 What about SDHI, how does that affect --

19 A. If we go --

20 Q. I'm moving on, Dr. Jacobsen.

21 A. Okay. If we go to page 6 of 17 of
22 whatever this document was. It's got FRAC on the

1 front of it.

2 Q. Right.

3 A. Those affect respiration.

4 Q. Right.

5 A. Okay. Respiration, metabolism, you can't
6 have metabolism without respiration or you can't
7 have respiration without metabolism.

8 Q. Okay. Are you ready for the next
9 question?

10 A. Sure.

11 Q. Okay. SDHI's---

12 A. Yes.

13 Q. -- how do they inhibit fungal respiration?

14 A. They also affect enzymes within the
15 mitochondria, but they're inside the mitochondrial
16 actions.

17 Q. Are those different enzymes than the ones
18 affected by the QoI?

19 A. Yes, but the broad effect of all three is
20 metabolism, respiration.

21 Q. Understood.

22 Can we go back to Exhibit 1038.

220

1 **A. Yes. That's this great big thing?**

2 Q. Yeah. We were looking at the table on
3 page 70 of 728.

4 **A. Uh-huh.**

5 Q. And I wanted to look at spray 10; do you
6 see that?

7 **A. Yes.**

8 Q. And the combination of fungicides here are
9 fungicides that in your view have an overlapping
10 mode of action, correct?

11 **A. I can't speak to Fipronil, but the**
12 **azoxystrobin, cyproconazole, and mancozeb, yes.**

13 Q. Okay. And the observed value for spray 10
14 is 88. Am I reading that right?

15 MR. FELDSTEIN: Objection, foundation.

16 **A. Let me go back and just look at the header**
17 **to be sure. That would control -- it says "Control**
18 **0." So I'm looking at this -- I would expect it's**
19 **the observed, yes.**

20 Q. Okay. And the column next to it is the
21 Colby predicted?

22 **A. That's correct.**

1 MR. FELDSTEIN: Objection, foundation.

2 Barry, give me a second.

3 Q. So then spray 10, again, on page 70, we
4 have an observed value of 88 and a Colby predicted
5 of 89, correct?

6 MR. FELDSTEIN: Objection, foundation. Go
7 ahead.

8 **A. That's the way I interpret this table.**

9 Q. Okay. And to get the Colby ratio we do
10 that same math you did before, right?

11 **A. That is correct.**

12 Q. Is that 88 divided by 89?

13 **A. That is correct.**

14 Q. Okay. If I do that math, I get 0.99.
15 Does that sound about right to you?

16 **A. Yes. I knew it was going to be less than**
17 **1.**

18 Q. It's just under 1, though, fair?

19 **A. Yep.**

20 Q. And Dr. Oliveira having gotten a Colby
21 ratio of 0.99, he describes that result as
22 antagonistic, correct?

1 MR. FELDSTEIN: Objection, foundation,
2 misstates the record.

3 **A. That is Dr. Oliveira's interpretation.**
4 **He's interpreting a Colby ratio of less than 1 as**
5 **not synergistic.**

6 Q. Just as UPL did in the previous document
7 we looked at, correct?

8 MR. FELDSTEIN: Objection, foundation.

9 **A. The previous document was --**

10 Q. That was 1034.

11 **A. And that was the one we did the**
12 **calculations, 1034? Yes.**

13 Q. So in both of those UPL was using 1 as the
14 value above which there would be synergy?

15 **A. That is correct.**

16 Q. If you could go -- this is Exhibit 1038.
17 If you could go to paragraphs 37 and 38 which
18 appear on page 62.

19 **A. 37. Yes, I've got that.**

20 Q. Okay. There's a description of Colby in
21 paragraph 37 that continues to paragraph 38,
22 correct?

1 **A. Let me read it. I haven't seen this**
2 **document before.**

3 **Yes.**

4 **Q. Have you read that?**

5 **A. Yes, I read it.**

6 **Q. Okay. Do you see any critique in here of**
7 **using Colby for fungicidal combinations that**
8 **involve mancozeb?**

9 **A. No, I did not.**

10 **Q. Let's go back to your declaration. This**
11 **is Exhibit 2020 and page 88 is where I'm at.**

12 **A. Yes. Page 88. Okay.**

13 **Q. Got it?**

14 **A. Got it.**

15 **Q. I'm looking at the table and I want to**
16 **know -- my question is how did you derive the**
17 **values that are shown in this table on page 88?**

18 **A. We took average improvement of disease**
19 **severity for compounds that were individually**
20 **listed, the data for that. The same for average**
21 **yield improvement and the same for average**
22 **improvement in foliage retention. Okay?**

1 Q. Uh-huh.

2 A. And we also looked at all of the data --
3 or looked at all of the data for combinations and
4 then we looked at the improvement over control, and
5 for individual components the average improvement
6 in disease severity was 56 percent, for the
7 combination 74 percent; the average improvement in
8 yield was 143 percent for the individual
9 components, 182 percent for the components
10 combined; and average improvement of foliage
11 retention was 7 percent for the individual
12 components, 17 percent for the combinations.

13 Q. Okay. So just focusing on the first row,
14 average improvement in disease severity, I take it
15 the data that you averaged is the data that's in
16 your Appendix B?

17 A. Yes.

18 Q. Okay. Are you able to show me in
19 Appendix B where you got the -- strike that.

20 Let's focus, again, on average improvement
21 in disease severity. Do you follow me?

22 A. Yes.

1 Q. And the individual components value.

2 A. Yes.

3 Q. So that one box, 56 percent.

4 A. Yes.

5 Q. Can you show me in Appendix B how you --
6 what you used to calculate that?

7 A. Okay. Then we have to go -- so if we go
8 to the disease severity. Okay. For group A
9 fungicides if you go to page 46.

10 Q. Okay.

11 A. Okay. And for the group B fungicides --

12 Q. Can I stop you there?

13 A. Yes.

14 Q. I have a question about group A.

15 A. What page?

16 Q. You said page 46.

17 A. Yes. I believe that's the right page.

18 Q. Which values did you use from this table?

19 A. I believe I use the area under the disease
20 progress curve, the AUDPC. That stands for area
21 under the disease progress curve.

22 Q. So you just took those values and averaged

1 them?

2 **A. Yes, the individual components and then**
3 **for the combinations.**

4 Q. Okay. I'm focused on just the individual
5 components.

6 **A. Okay.**

7 Q. So the average we have in the table that
8 we were looking at on page 88 is 56 percent.

9 **A. Yes. So --**

10 Q. And I'm wondering which values in this
11 table you averaged to get 56 percent.

12 **A. Okay. We used the untreated control,**
13 **794.9.**

14 Q. Yeah.

15 **A. And then we used -- and we converted that**
16 **into percent control or percent improvement. And**
17 **if, for example, we just took A1, we have a number**
18 **620.7.**

19 Q. Right.

20 **A. Which is less -- the bigger the number --**
21 **area under disease progress curve is disease**
22 **severity. Okay? So then 620.7. Then the other**

1 individuals, we averaged those and what percent
2 improvement was it over the untreated control.

3 Q. And is that value provided in the control
4 percentage column?

5 A. No, I don't believe so. I'd have to --
6 it's been so long since I've done that and I don't
7 have a calculator with me. Let's see. That's 200.
8 I'm going to guess -- I don't have my calculator
9 with me. I did this with a spreadsheet. So 620.7
10 would appear to be about 78 percent of the control.
11 So 22 would appear to be the right number there,
12 yes.

13 Q. Okay. So did you then take -- looking at
14 the table on page 46, did you then take the 22, the
15 37, the 32, continuing down to 39 for 87, did you
16 take those values and average them together --

17 A. No.

18 Q. -- to get the 56?

19 A. No.

20 Q. No. Okay.

21 A. I took all of the area under the disease
22 progress curve for the individuals, took the mean

1 **of that and compared that to the control.**

2 Q. Okay. Let's go -- if we go back to
3 page 88 of your report, let's focus for a minute on
4 the average improvement in foliage retention. Did
5 those values come from Appendix B?

6 A. **From what?**

7 Q. Appendix B.

8 A. **Yes.**

9 Q. Okay. Can you show me where?

10 A. **Those would be the things that would be --**
11 **just a second. Foliage retention came from the**
12 **data, for example, for group A on page 23 and**
13 **defoliation and foliage retention are an inverse.**
14 **In other words, if we had 98 percent defoliation,**
15 **we have 2 percent foliage retention.**

16 Q. Okay. And is that not reflected on the
17 table on page 25 -- I'm sorry -- 24?

18 A. **On page 24?**

19 Q. Uh-huh.

20 A. **Yes.**

21 Q. Okay. So here are you averaging together
22 the 2.2 through the 9.1 and then including group B

1 to get a global average?

2 **A. Here we average across all areas, all**
3 **individuals.**

4 Q. I'm asking you how you got the 7 percent
5 on page 88 of your report?

6 **A. If we took the average -- yeah. We take**
7 **the average under the average column divided by six**
8 **different -- the mean of those six, I believe**
9 **that's going to come, rounded off, to 7 percent.**

10 Q. Okay. So then back to page 88. So on
11 page 88 you provide the values for the individual
12 components averaged together and the values for the
13 combined components together, right?

14 **A. Yes.**

15 Q. Okay. And from the data that you present
16 on this table, this average data, can you tell
17 whether the improvement that you see going from the
18 individual column to the combined column, whether
19 that is simply additive?

20 **A. You can't tell anything other than what**
21 **the numbers are.**

22 Q. Okay. So you can't tell whether it's

1 synergistic?

2 **A. No.**

3 Q. Okay. You don't know?

4 **A. No, and that's not what's presented in**
5 **this table.**

6 Q. Okay.

7 So then in paragraph 247 you say "All the
8 tested combinations outperformed the individual
9 components by wide margins"; do you see that?

10 **A. That's correct.**

11 Q. Is that just a judgment call on your part?

12 **A. Well, it's comparing is 74 greater than**
13 **56, is 182 greater than 143, is 17 greater than 7.**
14 **You know, those are pretty wide margins.**

15 Q. You consider those to be wide margins?

16 **A. Yes.**

17 Q. Okay. What's the criteria for sort of
18 wide versus not wide?

19 **A. It's my experience and my judgment.**

20 Q. Okay. So it's just looking at this, looks
21 like a wide margin to you?

22 **A. Yes.**

1 Q. There's no sort of basis upon which that
2 determination was made other than just looking at
3 it?

4 A. There's no definition that I know in the
5 literature for wide margin if that's what you're
6 asking.

7 Q. Okay. I just want to know what would be
8 wide and what wouldn't be wide?

9 MR. FELDSTEIN: Objection, form.

10 A. I guess I'd have to look at a given
11 dataset to give you an opinion of that. My opinion
12 is the data that we're looking at here, these are
13 pretty wide margins.

14 Q. Okay. You go on in paragraph 248 --

15 A. Yes.

16 Q. -- to describe what's shown I believe in
17 the table on the previous page as enhanced
18 efficacy?

19 A. Uh-huh.

20 Q. So you consider the improvement that's
21 shown on page 88 to be enhanced efficacy?

22 A. Very definitely.

1 Q. Okay. What do you mean by "enhanced
2 efficacy"?

3 **A. Did you improve your disease control, did**
4 **you get higher yield, did you retain more foliage.**

5 Q. So as long as the combined is greater than
6 the individual, you consider that enhanced
7 efficacy?

8 **A. Yes.**

9 Q. Okay. So if the value, looking back at
10 the table, average improvement in disease severity,
11 if the individual components had averaged
12 56 percent and the combinations had averaged
13 60 percent, that's greater?

14 **A. Yeah. I would not call that a wide**
15 **margin.**

16 Q. Okay. Would you call it enhanced
17 efficacy?

18 **A. If we were comparing 56 percent and**
19 **60 percent, no.**

20 Q. Okay. How high do you got to go for it to
21 be enhanced efficacy?

22 **A. From my experience over my career and**

1 **dealing with lots and lots of datasets and doing**
2 **statistical analysis on lots and lots and lots of**
3 **data and looking at numbers like these, I would say**
4 **a greater than 10 percent difference would be**
5 **probably meaningful.**

6 Q. What do you mean by "meaningful"?

7 A. **It would be enhanced efficacy.**

8 Q. So is enhanced efficacy just a difference
9 that's significant statistically?

10 A. **That would -- yeah. In broad terms,**
11 **yes.**

12 Q. Okay. So any significantly --
13 statistically significant difference -- strike
14 that.

15 Any statistically significant increase
16 would in your view be enhanced efficacy?

17 A. **That's correct.**

18 Q. Might not be synergy, though, right?

19 A. **That's correct.**

20 Q. Okay. So when you use the phrase
21 "enhanced efficacy" in paragraph 248, you don't
22 mean synergy?

1 **A. I do not mean synergy.**

2 Q. Okay. You describe the result, though, as
3 surprising and unexpected, right?

4 **A. Those words were chosen because of the**
5 **'727 Patent, because I felt that they reflected the**
6 **'727 Patent.**

7 Q. Well, you're describing, though, data that
8 Syngenta generated in their own field trials in
9 Brazil, correct?

10 **A. Uh-huh.**

11 THE REPORTER: Yes?

12 THE WITNESS: Yes.

13 Q. That's not a study that was done in the
14 '727 Patent, is it?

15 **A. No.**

16 Q. Okay. So, you know, just based on the
17 outcome here, you think it's a wide margin,
18 right?

19 **A. Yes.**

20 Q. The difference is statistically
21 significant and on that basis alone it's enhanced
22 efficacy, right?

1 A. I don't know that it's statistically
2 significant.

3 Q. You don't?

4 A. No. I do not have the data to do the
5 statistics. I don't have the replicate data for
6 each of the locations. If I had had the replicate
7 data, then we could have done a statistical
8 analysis, but we don't have that information.

9 Q. Okay. Earlier you defined for me enhanced
10 efficacy as a statistically significant increase.

11 A. What I described to you is what in my
12 judgment based on my experience analyzing lots and
13 lots and lots of data --

14 Q. Right.

15 A. -- where I would judge that it would be a
16 significant difference.

17 Q. And that would be enhanced efficacy?

18 A. Yes.

19 Q. But you don't know whether these numbers
20 are statistically greater?

21 A. No. All I can do is look at the averages
22 from average data from locations and the average

1 over all the trials.

2 Q. So then how can you describe this as
3 enhanced efficacy if you don't know if there's a
4 statistical significant difference?

5 A. I'm going to repeat myself and I think
6 I've answered this question three times to you. I
7 will make it simple. You asked me at what level
8 and I said about a 10 percent difference. So
9 10 percent of 50 -- or 10 percentage, that's -- I'd
10 have to figure --

11 Q. So 10 percent of 56 is 5.6?

12 A. No. 66 percent is the 10 percent
13 difference, okay, and that's 10 -- a difference of
14 10. So that's -- I'm trying to calculate it. That
15 would be just -- I'd have to do the math.

16 Q. I'll do the math.

17 A. It's approaching a 15 percent difference.

18 Q. Oh, this is a 15 percent difference?

19 A. No, no. You asked me the question would
20 66 -- if the number over in the combination if that
21 was 66, and I said that's probably about where I'd
22 be -- based on my 50-some years of work in doing

1 statistics likelihood that if it was 66 it would be
2 significantly different than 56. Okay. I was just
3 trying to calculate that improvement. You know, 46
4 is what -- 46 divided by 56 is what? I'm going to
5 guess -- I don't know what it is.

6 Q. .82.

7 A. Yeah. So, you know, it's nearly a
8 20 percent difference. And in biological data,
9 broad generalizations, if you've got a 20 percent
10 difference with this many trials involved, it's
11 probably significant.

12 Q. So it's probably enhanced efficacy?

13 A. Yes.

14 Q. Where did you get that phrase "enhanced
15 efficacy"? Is that a term you use?

16 A. That was a term that was in the
17 '727 Patent.

18 Q. Okay. So you borrowed it from there?

19 A. Yes. I answered a question with that
20 information prior to this.

21 Q. Well, that question, though, asked you
22 about your judgment that the enhanced efficacy was

1 both surprising and unexpected.

2 MR. FELDSTEIN: Let him finish.

3 A. And I answered you, I used those words
4 because they stuck in my mind from the
5 '727 Patent.

6 Q. Well, setting aside the patent, just
7 looking at the data, do you consider it to be --
8 the data on page 88, do you consider it to be
9 surprising and unexpected?

10 A. Unexpected relative -- if you go in the
11 literature on soybean rust -- and I looked at, you
12 know, de Souza, Godoy, De --

13 Q. If I could stop you there.

14 A. Just a minute, I'm answering your
15 question.

16 -- De Oliveira where they had these levels
17 of control, you know, in many cases they were
18 showing if they had 50 percent control or
19 60 percent control they were really, really happy.
20 So there have been numbers all over the board. So
21 relative to the prior work these are pretty
22 exciting numbers.

1 Q. Okay. So they're not based on a
2 statistical analysis, they're based on your
3 judgment?

4 MR. FELDSTEIN: Objection, misstates the
5 testimony.

6 A. **That is what I've said.**

7 Q. Okay.

8 If we go back to table 88 --

9 MR. FELDSTEIN: Sorry. Where are you,
10 Counsel?

11 MR. CARSON: I'm sorry. The table on
12 page 88.

13 If the effects of the active ingredients
14 combined were merely additive, what sort of values
15 would you expect to see here?

16 A. **I don't have the data as I analyzed -- I**
17 **used for this table to look at synergism or**
18 **antagonism. I'm making no judgments on that.**

19 Q. Okay. So the data on this table could
20 reflect simply additive effects?

21 A. **Or it could reflect synergy. You'd have**
22 **to analyze it and that's what I did later on using**

1 **the Colby formula.**

2 Q. Which we'll get to.

3 **A. Yes.**

4 Q. But it could be simply additive?

5 **A. It could be.**

6 Q. Okay.

7 **A. We can't tell from this data.**

8 Q. We can't tell. But in your view -- let me
9 ask you this. In your view would an additive
10 effect be surprising?

11 MR. FELDSTEIN: Objection, incomplete
12 hypothetical.

13 **A. It would depend -- I don't know how to**
14 **answer that question. I don't understand your**
15 **question.**

16 Q. Well, I mean, if you combine two
17 fungicides and you get an additive effect --

18 **A. Yes.**

19 Q. -- would that be surprising?

20 MR. FELDSTEIN: Object to form, incomplete
21 hypothetical.

22 **A. But you gave me a hypothetical two**

1 fungicides. I'm dealing with the fungicides that
2 were tested here.

3 Q. Okay.

4 A. And I'm saying that it's a surprising
5 effect based on if you look at the control level
6 shown in Godoy, de Souza, de Oliveira where they're
7 talking -- they were excited about 50 percent
8 improvements, you know. When you're starting to
9 show 70 percent improvement, that's pretty
10 exciting.

11 Q. If we go on to paragraph 249, you say that
12 "A person of ordinary skill in the art would not
13 have limited their consideration of synergy to the
14 Colby calculation"; do you see that?

15 A. That is correct.

16 Q. What else might a person of ordinary skill
17 in the art use in considering synergy?

18 A. Well, the proper -- the proper way to do
19 this, we would have taken each of these fungicides,
20 developed dose-response curves, cited a specific
21 level of control that we're looking for. Then we'd
22 have used those levels where we achieved, let's

1 say, effective concentration of .7 for each of
2 those fungicides and then considered them alone,
3 the observed control, and then in combination. You
4 simply would have to do the dose-response curves.

5 For example let's take azoxystrobin. If
6 the dose-response curve said that we had to
7 have .05 microliters per liter to achieve
8 70 percent control, on tebuconazole we would have
9 needed to achieve 70 percent control, we might of
10 had to have 8 micrograms per liter. Okay? And for
11 mancozeb we might of needed to have 30 micrograms
12 per liter to achieve those levels. So you have to
13 be looking at apples and apples and that's the
14 proper way to do this.

15 Now, as I mentioned, in the literature
16 there's lots and lots and lots of ways to do this,
17 but they all -- the people that have considered
18 this say that you need to develop the dose-response
19 curve and the Wadley method is really the most
20 common way to look at synergy where you have
21 overlapping modes of action.

22 Q. At the bottom of paragraph 249 you say

1 "The theoretical nature of Colby provides an
2 additional way to evaluate synergy, but it does not
3 detract from a person of ordinary skill in the art
4 considering synergy based on enhanced efficacy over
5 individual components."

6 **A. That is correct.**

7 Q. How would you ascertain synergy based on
8 enhanced efficacy over individual components?

9 **A. If the Colby ratio shows 1 or above,**
10 **there's definitely synergy. I don't care how**
11 **you -- what you do, there's definitely synergy**
12 **there. If you -- I've answered this question once**
13 **before. If you really do it the proper way, okay,**
14 **you might have a Colby ratio of .8, for example,**
15 **but then if you did the Wadley calculation, if you**
16 **had all the dose-response curves and you did it the**
17 **proper way, a Colby ratio of .8 by Colby -- by**
18 **Wadley would show, yes, it's synergy.**

19 Q. In this --

20 **A. I can foresee that kind of data. Colby**
21 **would overestimate what you have to have for**
22 **synergy. If it's above 1.0, I've got no question**

1 **there's synergy.**

2 Q. So maybe I read this sentence wrong, but I
3 read it to suggest that there was a way to
4 determine synergy apart from Colby.

5 A. **And that's what I've explained to you with**
6 **the wadley calculation.**

7 Q. Okay. I'm just asking you about this
8 sentence right now. Okay?

9 A. **Okay.**

10 Q. Am I right that this sentence suggests
11 that you can determine synergy in a way other than
12 using Colby?

13 A. **Yes.**

14 Q. Okay. So -- and according to this
15 sentence, the alternative -- or an alternative to
16 Colby would be to consider synergy based on
17 enhanced efficacy over individual components,
18 correct?

19 A. **That's not what I mean by this -- by this,**
20 **no.**

21 Q. That's not what you mean?

22 A. **No. What I meant is if you have a Colby**

1 **ratio where Colby says there's synergy, there's, in**
2 **fact, synergy. That's how I meant to write this**
3 **sentence and that's what I meant.**

4 Q. Okay. So you're not suggesting that
5 someone could sort of ballpark an enhanced efficacy
6 judgment and then use that to determine synergy?

7 A. **No. We're talking about two different**
8 **things.**

9 Q. Okay. And you don't think your sentence
10 suggests that?

11 A. **You can have enhanced efficacy without**
12 **synergy.**

13 Q. Which is what's shown on table 8 -- the
14 table on page 88, right?

15 MR. FELDSTEIN: Objection, misstates the
16 record.

17 A. **One could say that.**

18 Q. So you can't determine synergy based on a
19 judgment of enhanced efficacy, right?

20 A. **No, not unless you did the experiment the**
21 **right way.**

22 Q. If we could turn to Appendix B, which

1 we've looked at a bit already. You may have
2 testified to this earlier this morning, but looking
3 at these tables in Appendix B, did you prepare
4 these tables?

5 **A. These were prepared at my direction.**

6 Q. And what do you mean by "prepared at my
7 direction"?

8 **A. I told counsel what to analyze for and how**
9 **to do the Colby calculations, and that's what they**
10 **did.**

11 Q. And they --

12 **A. The formatting, they suggested some**
13 **formatting and I suggested -- the final formatting**
14 **was at my suggestion. It was an evolutionary**
15 **process.**

16 Q. Did you review the tables to confirm that
17 they were accurate?

18 **A. That is correct, yes, and that's why I**
19 **have the red flags in the deposition.**

20 Q. And I promise you we're going to get to
21 that.

22 The formulas, are you -- strike that.

1 You reference equations in some of these
2 tables and you provide equations?

3 **A. Yes.**

4 Q. Who came up with those equations?

5 **A. Those are how you do Colby.**

6 Q. Okay. Who provided those equations to the
7 individual who prepared the tables?

8 **A. They came from Colby used this method to**
9 **do these calculations.**

10 Q. So was your instruction take Colby and
11 apply it to this data and generate me some
12 tables?

13 MR. FELDSTEIN: Let him finish the
14 question, Doctor.

15 **A. No. My instruction was -- in fact, yes,**
16 **in a way. I didn't take the Colby said A plus B**
17 **plus C. We used the actual do it this way.**

18 Q. Colby provides a couple of different ways
19 to do this, doesn't it?

20 **A. Yes. In Colby if you look at those two**
21 **different methods, you're basically getting an**
22 **inverse number. So you've got to think about what**

1 **you're doing.**

2 Q. And in your analysis did you use one
3 method or the other or both?

4 A. **I used the one that would be -- it**
5 **doesn't -- you could use either method. You just**
6 **have to understand what you're looking at.**

7 Q. I understand that. I'm asking you what
8 you used.

9 A. **I've got to think about the Colby paper.**
10 **The second method was the -- I'm just recollecting**
11 **the Colby paper -- was the simplest formula to**
12 **use.**

13 Q. So there's a more complex formula and a
14 simpler one?

15 A. **The first one is the more complex, yes.**

16 Q. Which one did you use?

17 A. **I just said that. I used the simplest**
18 **one.**

19 Q. Oh, I'm sorry. And who decided to use the
20 simple formula?

21 A. **And who decided what?**

22 Q. To use the simple formula.

1 **A. I did.**

2 Q. And so your instruction to the lawyers was
3 use the simple formula, here's the data, go make
4 some tables?

5 **A. That's correct. And actually -- never**
6 **mind.**

7 MR. CARSON: So should we take a quick
8 break?

9 THE REPORTER: Yes.

10 (A break was had.)

11 BY MR. CARSON:

12 Q. Dr. Jacobsen, you said that you found an
13 error in your declaration. Can you show me that?

14 **A. Yes. I believe it's a typo. It's where**
15 **the value presented was 3.9 on page 92 for**
16 **treatment B7, area 7.**

17 Q. If we could stop there.

18 **A. Okay.**

19 Q. Okay. 92, I'm sorry, treatment --

20 **A. 7, B7, area 7.**

21 Q. Area 7.

22 **A. And I believe the correct number is 1.45**

1 or 1.4. It's 145.1 divided by 100 and that's what
2 the number should be. How it got in this
3 deposition as 3.9 I don't know.

4 And then also -- it's virtually the same
5 data shown on page 15 in the appendix, also for B7,
6 area 7.

7 Q. That should be 1.45?

8 A. Yes. If you take -- if you go on page 13
9 for the observed, B7, area 7, it's 145.1, the Colby
10 predicted is 100. So it's 145.1 divided by 100,
11 which is 1.45, rounded off.

12 Q. Okay. Any other errors?

13 A. There are a few typos in here. One that
14 comes to mind talked about -- we were talking about
15 using copper fungicides with the triazole
16 fungicides, cyproconazole or some other things, you
17 get a number of different ligands and it says
18 "ligards." There was one other place. It was just
19 a typo. It didn't change the meaning of anything.
20 It was an obvious typo.

21 Q. So in terms of the data that you present
22 in the tables in the body of your report and in

1 Appendix B, you've reviewed those for accuracy and
2 the only errors are the two you've identified
3 today?

4 **A. That's the only ones that I found, yes.**

5 Q. All right. If we could turn to Appendix B
6 and in particular the analysis you did on
7 defoliation, which I believe starts on page 23; is
8 that correct?

9 **A. For group A fungicides, yes.**

10 Q. Okay. And then group B will immediately
11 follow this in terms of defoliation, correct?

12 **A. Not immediately, but it's a number of**
13 **pages in. Group B starts on page 35.**

14 Q. Okay. I just meant that the group A
15 collection of tables, when that ends group B
16 collection starts?

17 **A. Well, there's some other presentations of**
18 **that data in bar graphs.**

19 Q. Okay. Thank you.

20 So looking at group A, page 23, I just
21 want you to walk me through the first three or four
22 tables here and explain to me what's being shown

1 and how it was calculated.

2 **A. Okay. The average is not the mean of the**
3 **numbers for 1, 2, 3, and 4. The average is what**
4 **was presented in the Syngenta data. Okay? Then I**
5 **presented the average for areas 1, 2, 3, and 4.**
6 **Because of different times of disease onset and**
7 **some other factors, it was pretty clear to me that**
8 **different things were happening and there were**
9 **different time periods. Dr. Prates in his**
10 **deposition I think he said he took data through 56**
11 **days. Well, we didn't receive information for up**
12 **to 56 days for every area. So you have to look at**
13 **it area by area by area. To look at a mean is**
14 **absolutely wrong.**

15 **Q. Okay. So let's do it this way. Focusing**
16 **on the table at page 23, this is a collection of**
17 **the data from Mr. Prates?**

18 **A. It's a collection of data that I received**
19 **from Syngenta -- or received from counsel that was**
20 **received from Syngenta in Exhibits 1031, 1032, and**
21 **1033.**

22 **Q. Okay. So looking at the area 1, area 2,**

1 area 3, and area 4 values, that data is taken from
2 the exhibits you just showed me?

3 **A. That's correct.**

4 Q. Okay. And then the first column of data,
5 the average, you calculated those?

6 **A. No. That's Syngenta's number.**

7 Q. Okay. Okay. So table 23 is Syngenta
8 data?

9 **A. All of it's Syngenta data.**

10 Q. Okay. Let's go to the table on page 24
11 and how did you generate this table?

12 **A. Well, it shows the formula. If you took**
13 **100 -- because we wanted to get into a percentage.**
14 **Okay?**

15 Q. Uh-huh.

16 **A. So 100 minus the check. So in terms of**
17 **remaining foliage, okay, for the check there's**
18 **nothing left. If we looked at area 4, for**
19 **treatment A1 it says there was 98 percent left. If**
20 **then we have the remaining foliage, that's the**
21 **inverse. So 98 from 100 is equal to 2. Okay?**

22 Q. Understood. So if I could summarize

1 quickly and tell me if I'm right or wrong. You're
2 taking the values on page 23, each of them in each
3 field and you're subtracting them from a hundred to
4 generate the values in each field in -- on page
5 24?

6 **A. That's correct. And those are reflected**
7 **then on page 25.**

8 Q. I'm not there yet.

9 **A. Okay.**

10 Q. I'm on page 24.

11 **A. Okay.**

12 Q. So just a couple of examples here. So if
13 we look at -- page 24, if we look at A8 --

14 **A. On page 24, okay.**

15 Q. -- yep, treatment A8 -- strike that.

16 For the average column did you also simply
17 subtract the average numbers from table 23,
18 subtract those from a hundred?

19 **A. Yes.**

20 Q. Okay. So focusing on A8, the value for
21 area 4 is 46.7 as reflected on page 24?

22 **A. That's the remaining foliage, yes.**

1 Q. Okay. And you obtain that by taking 53.3
2 from page 23 and subtracting it from a hundred?

3 A. That is correct.

4 Q. Okay. And this is defoliation. So in the
5 control group no fungicide's applied, there's a
6 hundred percent defoliation?

7 A. That's what the data says, yes.

8 Q. Okay. Then when you apply fungicides
9 you -- less of the plant gets defoliated?

10 A. Yes.

11 Q. Okay.

12 So then as we go from page 24 to page
13 25 --

14 A. Okay.

15 Q. -- before you tell me how you generated
16 page 25, I'd like to know why.

17 MR. FELDSTEIN: Object to form.

18 MR. CARSON: If that doesn't make sense, I
19 can ask another question.

20 A. Simply trying to get the numbers that I
21 could use to do the Colby ratios.

22 Q. Okay. So let's look at A1. Are you

1 there?

2 **A. Yep.**

3 **Q. Area 4 again, 2.0.**

4 **A. Yes.**

5 **Q. How did you get that value?**

6 **A. Okay. The check was a hundred minus 2**
7 **from -- yeah, minus 2 from A1 up here divided by**
8 **100 times 100.**

9 **Q. Okay. I get 98. So a hundred minus 2 is**
10 **98?**

11 **A. Yes.**

12 **Q. Divided by a hundred?**

13 **A. Times 100.**

14 **Q. So those cancel out, right? Dividing by a**
15 **hundred and multiplying by a hundred cancel out?**

16 **A. Yes.**

17 **Q. So you've got a hundred minus 2 gives you**
18 **98?**

19 **A. Well, this -- on page 25 this says**
20 **defoliation. Page 24 is remaining foliage. So**
21 **it's 98 percent defoliated, 2 percent remaining.**
22 **Defoliation and remaining foliage are two different**

1 **numbers.**

2 Q. Where does it say defoliation on page
3 25?

4 **A. Right there (indicating).**

5 Q. Okay. Doesn't page 24 say defoliation in
6 the very same place?

7 **A. It says -- but it also says remaining**
8 **foliage.**

9 Q. Okay. Does page 25 have any sort of title
10 bar?

11 **A. Well, what we're looking at on page 25 is**
12 **the remaining foliage, yes.**

13 Q. Okay. So I just --

14 **A. Excuse me. The percent -- what we're**
15 **looking at on page 25 is the percent defoliation.**

16 Q. Okay. So I'm still struggling to figure
17 out how you got the value of 2.0 in row A1, area 4.

18 **A. Well, there were two different methods to**
19 **look at to get the same numbers. On page 25 it's**
20 **literally superfluous to page 24.**

21 Q. Oh, so page 25 should be identical to page
22 24?

1 A. They're not going to be exactly identical,
2 but close, yes.

3 Q. Well, so I'm wondering on page 25 --
4 again, I'm focused on A1.

5 A. Uh-huh.

6 Q. And the equation.

7 A. Uh-huh.

8 Q. The A1 that you plugged into that
9 equation, is it possible that that was 98 --

10 A. Yes.

11 Q. -- rather than 2?

12 A. Yes.

13 Q. Okay. So what you plugged in there was,
14 in fact, the values from page 23?

15 A. Yes.

16 Q. Okay. And then the math works?

17 A. Yes.

18 Q. Okay. So run me through the A1, area 4
19 calculation on page 25.

20 A. Okay. Area 1, A4 from page 23 we have a
21 value of 98. Okay? The check is 100. 100 minus
22 98 divided by 100 times 100 is 2 percent. It's

1 **2.**

2 Q. Okay. Which is what you've got here?

3 **A. That's correct.**

4 Q. Okay. So just focusing on the equations,
5 the equation column on page 25 --

6 **A. What I tried to do is run it through**
7 **similar to what Colby shows in his formulas.**

8 Q. Okay.

9 So looking at the equation column on page
10 25, the check value for group A is always a
11 hundred, right?

12 **A. That's what the data says, yes.**

13 Q. Okay. So in terms of the equation that's
14 applied on page 25, the check value in the
15 denominator is always a hundred?

16 **A. That is correct.**

17 Q. And it's always multiplied by a hundred?

18 **A. In this situation, yes.**

19 Q. Which always cancels it out?

20 **A. Yes.**

21 Q. So really all of the equations on page 25
22 should collapse to check minus a number, correct?

1 **A. Yeah, if the -- if defoliation is a**
2 **hundred percent, yes.**

3 Q. Which it is for group A?

4 **A. Yes.**

5 Q. Okay.

6 **A. For this set of data, yes.**

7 Q. Okay. So the equation here really looking
8 at A1 is check minus A1?

9 MR. FELDSTEIN: Objection, misstates the
10 testimony.

11 **A. Yes.**

12 Q. Well, I mean, if you simplify it, it's
13 check minus A1?

14 **A. That's correct.**

15 Q. That's equivalent to what you've listed
16 here, correct?

17 **A. Yes.**

18 Q. And then, for example, looking at A8, the
19 equation there would be check minus A8, correct?

20 **A. For what area? Well, it doesn't matter.**
21 **Yes.**

22 Q. I'm looking at page 25.

1 **A. Yes. Okay.**

2 Q. They all collapse, right?

3 **A. Okay. Yes.**

4 Q. So the equation on page 25 is actually
5 identical to the equation on page 24?

6 **A. Yes.**

7 Q. Okay. Which means the results on page 24
8 will be identical to the results on page 25?

9 **A. No, because -- yes.**

10 Q. They will be identical?

11 **A. They should be, yes.**

12 Q. Okay.

13 So let's look at page 24, if we could go
14 back.

15 **A. Okay.**

16 Q. A8.

17 **A. Okay.**

18 Q. Areas 1, 2, 3, and 4 you've got 3, 25,
19 36.7, and 46.7; do you see that?

20 **A. I see that.**

21 Q. Okay. Were those numbers calculated
22 correctly? We'll get to page 25 in a minute here.

1 **A. A8 -- I'm going to be very honest with**
2 **you, I'm confused right now. Continue. I'm**
3 **confused right now.**

4 Q. Okay. So you can't -- let's take this one
5 step at a time. Maybe it will clear up.

6 **A. Okay.**

7 Q. So let's forget table -- strike that.
8 Let's forget page 25 for a second.

9 **A. Okay.**

10 Q. We'll just focus on 24.

11 **A. Yes.**

12 Q. And the row A8 on page 24.

13 **A. On page 24. Okay.**

14 Q. We're going to ignore page 25. Are you
15 there?

16 **A. Okay. Yep.**

17 Q. Okay. So A8, area 1 you've got a value of
18 3?

19 **A. A8, area 1 I've got -- on page 25 or 24?**

20 Q. 24.

21 **A. I've got a value of 3, that's correct.**

22 Q. And that's accurate, right, if you do the

1 math?

2 **A. Yes.**

3 Q. Okay. Area 2 for A8, is that value
4 accurate?

5 **A. I'm going to guess 26.7 and 73.3 equals a**
6 **hundred.**

7 Q. I think you're on the wrong row. We're on
8 A8.

9 **A. 25 and 75 is a hundred, yes.**

10 Q. That's accurate. Okay. Area 3 for A8 on
11 page 24.

12 **A. 24, A8, 36.7 and 63.3 equals a hundred.**

13 Q. Okay. Area 4, page 8 -- I mean page 24,
14 A8.

15 **A. 53.3 and 46.7 equals 100.**

16 Q. Okay. So focusing on page 24, all of the
17 values for A8 are correctly computed, correct?

18 **A. It would appear that way, yes.**

19 Q. Okay. And if we were to look at the
20 same -- let's not do it yet, we don't want to get
21 confused, but if we were to look at the same values
22 for A8 on page 25, they should be identical to the

1 values on page 24, correct?

2 **A. Yes, I believe so. I don't understand why**
3 **they're not identical.**

4 Q. Okay. And the values for A9 on page 24
5 should also be identical to the values for A9 on
6 page 25?

7 **A. I would think so, yes.**

8 Q. But they're not identical, are they?

9 **A. I'm trying to figure out why. Okay.**

10 Q. So just to break that down, we'll go back
11 to A8.

12 **A. Okay.**

13 Q. You provide the formula on page 25, right?

14 **A. Yes.**

15 Q. And you confirmed already that the A8
16 value that goes into that formula is going to be
17 the value on page 23?

18 **A. Yes.**

19 Q. And that value is 53.3, correct?

20 **A. For A8 what area?**

21 Q. Area 4.

22 **A. 53.3 is what's on page 23, yes.**

1 Q. Okay. And that's going to get plugged
2 into the formula on page 25, correct?

3 A. Yes.

4 Q. Okay. So let's do that math. It's a
5 hundred minus 53.3, correct?

6 A. That's correct.

7 Q. That's 47.7?

8 A. 46.7.

9 Q. 46.7. And then if we divide that by a
10 hundred and multiply it by a hundred, we're going
11 to get 46.7?

12 A. That's correct.

13 Q. But the value you've entered for A8, area
14 4 on page 25 is not 46.7, is it?

15 A. No. There's something wrong with the
16 equation as it's represented. You have to go into
17 the Colby formula. There's something wrong here
18 with this equation that's presented.

19 Q. Okay. So --

20 A. And there's a step missing here and --

21 Q. Well, let me ask you this. Why do you get
22 the same values for A1 through A7 but you're

1 getting different values for A8 and A9?

2 A. Well, because those are combined. In the
3 Colby formula you have to take one -- you have to
4 take each of the components from one and then those
5 get multiplied and then divided. So what is --

6 Q. Can I just --

7 A. I believe what is wrong with this is we
8 would have taken -- in calculating the A8 or any of
9 the combination values we would have taken the
10 separate values, made the multiplication and made
11 the division according to the Colby formula to come
12 up to the 23.3. So the equation that's
13 demonstrated here on page 25 is not correct.

14 Q. Okay. Aren't the Colby expected values
15 provided on the next page, page 26?

16 A. Yes.

17 Q. So the values -- the numbers on page 25
18 are not Colby expected values?

19 A. No, they're not.

20 Q. Okay.

21 A. But to come up with the observed for the
22 com- -- okay. There's something wrong with this

1 **equation. Just in my mental state at this moment I**
2 **can't tell you what it is.**

3 Q. Is there something wrong with the equation
4 or is there something wrong with the way the math
5 was done?

6 A. **There's something wrong with the equation.**

7 Q. So is the equation right for A4?

8 A. **Yes.**

9 Q. Okay. Because if you compare page 24 and
10 page 25, the A4 values are identical, correct?

11 A. **Yes.**

12 Q. So that --

13 A. **For the -- they're identical for the**
14 **individual treatments.**

15 Q. A4 is a combined treatment, isn't it?

16 A. **Oh, excuse me. The individual treatments,**
17 **A1 through A7, are I believe identical.**

18 Q. I want to look at A4, which is a combined.

19 A. **Yes, and A4 is -- it's wrong.**

20 Q. Well, are the values on page 24 for A4 the
21 same as the values on page 25?

22 A. **No, they are not.**

1 Q. I believe they are. Can you check them.

2 A. 24 and 25? No.

3 Q. Values for A4?

4 A. Well, it's 23.3, yes. Okay. Okay. Go
5 ahead.

6 Q. My question is whether the values for A4
7 are the same on page --

8 A. The value for A4 is the same on both page
9 24 and 25. The value for A4 is correct.

10 Q. So the equation for A4 on page 25 is
11 correct?

12 A. That's correct.

13 Q. Why would the equation for A4 be different
14 from the equation for A8?

15 A. It shouldn't be.

16 Q. Okay. So if the equation for A4 is
17 correct, then can we assume that the equation for
18 A8 is correct?

19 A. Yeah. I believe the 23.3 number is
20 incorrect.

21 Q. Let's drill down on that.

22 A. And then 20 -- A9 -- I can't explain to

1 **you why these two tables are different.**

2 Q. Okay. I think you just said that the 23.3
3 number is incorrect on page 25. Is that your
4 testimony?

5 **A. 23.3 should be correct.**

6 Q. It is correct or it's not correct?

7 **A. It is -- they're the same on 24 and 25.**

8 MR. FELDSTEIN: I don't want to interfere,
9 but it will help if you guys refer to which
10 formulation you're talking about.

11 MR. CARSON: I think we're clear.

12 BY MR. CARSON:

13 Q. So Dr. Jacobsen, looking at A8 --

14 **A. Yes.**

15 Q. -- that also has 23.3 for area 4, correct?

16 **A. That's correct.**

17 Q. That number is wrong, isn't it?

18 **A. I believe it is.**

19 Q. Okay. What about the area -- A8, area 3,
20 23.3, is that incorrect?

21 **A. A8, area 3, I believe that's incorrect.**

22 Q. A8, area 2, 26.7, is that incorrect?

1 **A. It would appear that it's a different**
2 **number, but -- yeah, it's a different number. It's**
3 **incorrect I guess.**

4 Q. And then A8, area 1 is also incorrect,
5 2.0?

6 **A. That's correct.**

7 Q. And looking at A9 on page 25, all of the
8 values there, area 1 through area 4, those also are
9 incorrect?

10 **A. It would appear so.**

11 Q. And the value for A10, area 4 on page 25,
12 that one's incorrect?

13 **A. That would appear so.**

14 Q. Okay.

15 Looking at page 26, 26 used the values
16 from page 25, correct?

17 **A. I'd have to do the math, but --**

18 Q. Let me ask you this. If page 26 used the
19 values on page 25, page 26 would be inaccurate as
20 well, correct?

21 **A. Okay. If it used the values from page 24,**
22 **it would be accurate.**

1 Q. Okay. If it used the values from page 25,
2 it would be inaccurate?

3 **A. That is correct. Because what I asked**
4 **counsel to do was show this in a step-wise manner**
5 **for the tables. At any rate...**

6 Q. So let's look at page 26, A8.

7 **A. Yes.**

8 Q. Area 4.

9 **A. Yes.**

10 Q. Well, strike that.

11 Can we go to page 93 of your report.

12 **A. Yes.**

13 Q. These are Colby ratios for defoliation; is
14 that right?

15 **A. That is correct.**

16 Q. And the table at the top are Colby ratios
17 for the group A?

18 **A. That is correct.**

19 Q. These Colby ratios in the table at the
20 top, table D, those were derived using the data on
21 page 26; is that correct?

22 **A. I believe so. You'd have to go to 26.**

1 **That was where we were developing the Colby ratios.**

2 **Yes. Yes.**

3 Q. Okay. So those Colby ratios were
4 calculated by dividing -- how were they calculated?

5 A. They were calculated by dividing the
6 **observed by the Colby expected.**

7 Q. And the Colby expected is provided on page
8 26?

9 A. That is correct.

10 Q. And the observed is provided on page 25?

11 A. 24.

12 Q. And 25, correct?

13 A. If you take the numbers on page 23 and do
14 the calculations for -- that are on page 24, those
15 are the numbers that are used.

16 Q. Okay. If the observed number -- if the
17 observed values on page 25 were used to calculate
18 the Colby ratios at page 93 of your declaration,
19 those Colby ratios would be inaccurate, correct?

20 A. No. We would be dividing 23 in the case
21 of area 4, treatment 4 by 15.1.

22 Q. Let's do it this way. On page 26 --

1 strike that.

2 I want to focus on A10.

3 **A. A10. What area?**

4 Q. Are you with me?

5 **A. Yes.**

6 Q. We're going to focus throughout. We're
7 going to focus on A10, area 4. Are you with me?

8 **A. Colby expected, 15.1.**

9 Q. Okay. And now, what is the observed
10 result for A10, area 4?

11 **A. 13.7.**

12 Q. Okay. That's -- so to calculate the Colby
13 ratio for A10, area 4 you would divide 13.7 divided
14 by 15.1; is that accurate?

15 **A. That is correct.**

16 Q. Okay. And I will represent to you that
17 that's .91.

18 **A. I thought I went through all of these
19 numbers and checked them.**

20 Q. Does .91 sound like the right number to
21 you in terms of doing the math?

22 **A. For area 4, A10?**

1 Q. Yes.

2 A. That's correct. And then we're looking at
3 the Colby expected for A4, area 10 -- A4, area 10,
4 15.1 -- area 4, A10. So it would be 15.1 -- or
5 22.7 divided by 15.1.

6 Q. I thought you told me the observed value
7 came from page 24?

8 A. The observed value -- okay. A10, 13.7
9 divided by 15.1, it's less than 1.

10 Q. Okay. And what you have on page 93 is a
11 value of 1.51, correct?

12 A. That's correct.

13 Q. So that's inaccurate?

14 A. Because it's reflecting the computation
15 from using the values on page 25 apparently.

16 Q. Which you already testified were
17 incorrect?

18 A. I believe they are.

19 Q. Okay. So that means the table at the top
20 of page 93 is incorrect as well?

21 A. At least for some of the values, yes.

22 Q. So for area -- page 93, the table at the

1 top, if you go back there.

2 A. Okay.

3 Q. For area 4, A10, the value should be .91,
4 not 1.51?

5 A. I believe that's correct.

6 Q. Is that a significant difference?

7 A. By my using .9 in my best professional
8 judgment it would still be considered synergy.

9 Q. I was just asking you --

10 A. I'm just saying I agree with you that the
11 number presented here appears to be wrong, but
12 if --

13 Q. Do you know --

14 MR. FELDSTEIN: He's still talking,
15 Counsel.

16 MR. CARSON: I think you were just going
17 to repeat yourself.

18 MR. FELDSTEIN: He's still talking,
19 Counsel. Do you want to finish your answer?

20 MR. CARSON: The question was just is the
21 number wrong.

22 MR. FELDSTEIN: He's still talking. Do

1 you want to finish your answer, Doctor?

2 THE WITNESS: Yes.

3 MR. FELDSTEIN: Go ahead and finish your
4 answer.

5 BY THE WITNESS:

6 A. Okay. Using what I think are the right
7 numbers, this is still -- it's going to compute --
8 I believe you said it was .9 something. In my
9 deposition I state by my best professional judgment
10 a Colby ratio of .9 could indicate, at least to me,
11 synergy.

12 Q. Okay. Let's do one more. If we go back
13 to page 26 and I want to focus on A9, area 1?

14 A. A9, area 1, yes.

15 Q. What's the Colby expected?

16 A. 2.3.

17 Q. Okay. And then what's the observed Colby?

18 A. 2.

19 Q. Okay. 2 divided by 2.3, is that the right
20 calculation?

21 A. Yes.

22 Q. Okay. When I do that I get .87. Does

1 that sound about right?

2 **A. Approximately, yes.**

3 Q. Okay. And, again, this was for A9, area
4 1?

5 **A. Uh-huh.**

6 Q. If we go to the table at the top of page
7 93 of your declaration, what Colby value ratio do
8 you have there?

9 **A. 1.31.**

10 Q. And that's not correct?

11 **A. It appears so, yes.**

12 Q. And the correct --

13 **A. That would be less than .9. So it should
14 be yellow.**

15 Q. So the correct value is less than .9?

16 **A. That's correct.**

17 Q. And so the correct color here would be
18 yellow, not green?

19 **A. That is correct.**

20 Q. Do you know whether there are other errors
21 in the tables on page 93?

22 **A. I thought I went back and checked the**

1 **numbers and I obviously used the numbers on page 25**
2 **to do the work.**

3 Q. So sitting here today, you can't tell me
4 which numbers on table D are correct and which ones
5 are incorrect?

6 MR. FELDSTEIN: Objection, misstates the
7 testimony.

8 MR. CARSON: I wasn't characterizing your
9 testimony. I was asking you a question. I can ask
10 you again.

11 Sitting here today, can you tell me which
12 numbers on table D are correct and which ones are
13 incorrect without redoing the math?

14 **A. I would have to go and redo the math.**

15 Q. All right. Let's look at the work you did
16 on yield. Are you with me?

17 Prior to your work in this case in
18 preparing your declaration have you ever seen or
19 done a synergy analysis for yield?

20 **A. No.**

21 Q. So you're not aware of any example in the
22 scientific literature in which synergy analysis was

1 done for yield?

2 **A. No, I'm not.**

3 Q. The Colby reference, which I don't think
4 we've looked at today. It's Exhibit 1012. Do you
5 recognize this as the Colby reference?

6 **A. Yes.**

7 Q. Does Colby describe how to apply its
8 analysis to yield?

9 **A. I'd have to reread all of the thing.**

10 Q. Well, you've read it more than once?

11 **A. Yes. In the right -- on page 20 of**
12 **Exhibit 1012, the second paragraph on page 20, "In**
13 **the use of equation 2 original units of data such**
14 **as weed counts or fresh or dry weights, fresh or**
15 **dry weights are analogous to yield."**

16 Q. Well, Colby's focused on herbicides,
17 right?

18 **A. Yes.**

19 Q. And so you're using an herbicide to
20 control a plant, right?

21 **A. Yes. That's the definition of an**
22 **herbicide.**

1 Q. Okay. And so in Colby in the control
2 group no herbicide is applied, correct?

3 A. Yes.

4 Q. So the control in this context tells you
5 the maximum growth of the target weed?

6 A. Yes.

7 Q. And then you apply herbicides and measure
8 the percent inhibition of the growth of that target
9 plant?

10 A. Yes.

11 Q. So if you measure the inhibition of growth
12 as a percentage, you can then subtract that from
13 100 to get growth as a percent of control?

14 A. Yes.

15 Q. And that's because you know what 100 is,
16 right, because the control group told you that in
17 the absence of herbicides this is what your plant's
18 going to look like, correct?

19 A. Yes.

20 Q. Now, when you apply -- or try to apply
21 Colby to yield data, the control group provides
22 minimum yields, not maximum yields, right?

1 **A. That's correct.**

2 Q. You don't know the maximum?

3 **A. You can convert -- when you're doing yield**
4 **you've first got to put all your data in percent**
5 **yield. Okay?**

6 Q. Uh-huh.

7 **A. So that's what you have to do.**

8 Q. But you don't know what the maximum yield
9 is?

10 **A. I think we're having a word issue here.**

11 Q. Strike that.

12 So with Colby the control group is no
13 herbicides?

14 **A. Yes.**

15 Q. And so the growth you get in the target
16 plant is the maximum growth you're going to get in
17 the absence of an herbicide?

18 **A. That's correct.**

19 Q. So you know the maximum value and you're
20 working from that with your applications, correct?

21 **A. Yes.**

22 Q. When you apply it to yield, the control

1 group doesn't give you the maximum value?

2 **A. That's correct.**

3 Q. It only gives you the minimum value?

4 **A. In most cases, yes.**

5 Q. Well, in the case of the data you looked
6 at, it only gave you the minimum value?

7 **A. I think in some areas where there was very
8 little disease there wasn't much difference.**

9 Q. So can you -- so going back to Colby,
10 because you know the maximum, the control gives you
11 the maximum, you can then subtract your percent
12 inhibition from a hundred to get percent of
13 control?

14 **A. Yes.**

15 Q. And if you get the percent of control, you
16 can use the simpler equation?

17 **A. That's correct.**

18 Q. Okay. With yield how do you measure
19 percent of control when the control is not the
20 maximum, it's the minimum? And Dr. Jacobsen, I'm
21 not asking you about your analysis. I'm just
22 asking about generally in terms of Colby and yield.

1 **A. The way you've worded it I agree with you.**

2 Q. Okay. So then if yield data doesn't give
3 you the maximum, don't you have to use the more
4 complex Colby formula?

5 **A. That is correct.**

6 Q. And yet you testified earlier today that
7 for your yield analysis you used the simpler Colby
8 formula, correct?

9 **A. I explained to you that for the**
10 **defoliation data I used the simple.**

11 Q. Okay. Which Colby equation did you use
12 for the yield data?

13 **A. The more complex.**

14 Q. Can you show me where that's reflected in
15 your report?

16 **A. No, it's not reflected in my report.**

17 Q. Well, your tables in Appendix B give the
18 equations, right?

19 **A. That's correct.**

20 Q. So we should be able to go there and see
21 the more complex formula, correct? I mean, the
22 simpler formula, correct?

1 A. We can see the formula that was used, yes.

2 Q. And your testimony is that it was the
3 simple formula?

4 A. No. We're using a more complex formula
5 because we're subtracting it from a hundred.

6 Q. Okay. What page are you looking at?

7 A. If you look at page -- because you get
8 negative numbers.

9 Q. What page are you looking at?

10 A. I'm looking at page 2 and I'm looking at
11 page 1. If you have two negatives, that becomes a
12 positive number. This shows how I got those
13 numbers.

14 Q. So my question was did you use the simple
15 formula or the complex formula for yield? Your
16 testimony was you used the simple one. Now you're
17 telling me you used the complex one, and I want to
18 know what you're looking at in your report to
19 confirm that.

20 MR. FELDSTEIN: Objection, asked and
21 answered.

22 MR. CARSON: What page?

1 **A. It's not in my report.**

2 Q. Then how do you know you used the -- how
3 do you know which formula you used?

4 **A. I tried to follow the Colby paper.**

5 Q. Colby provides a simple formula and a
6 complex formula.

7 **A. Yes. And I tried to follow -- when I was**
8 **doing the yield work, I followed the Colby formulas**
9 **here. When I was doing the defoliation data, I**
10 **followed the simple. That has to be the way I did**
11 **it.**

12 Q. So for defoliation you used the simple
13 formula, yield you used the complex formula?

14 **A. I believe so, yes.**

15 Q. Can we confirm that by looking at Appendix
16 B?

17 **A. Can you confirm it?**

18 Q. Can you confirm it?

19 **A. Yes, because we take -- on page 2 we**
20 **subtract everything from 100.**

21 Q. Okay. Let me stop you there. So that
22 indicates to you that you used the complex formula

1 for yield?

2 **A. I believe so, yes.**

3 Q. Okay. And if we go to page 3, you have
4 the equation there for the Colby expected result,
5 right?

6 **A. That's correct.**

7 Q. Is that the complex formula or the simple
8 formula?

9 **A. That would be the complex.**

10 Q. Okay. So your testimony is you used the
11 complex formula for yield?

12 **A. I believe that is the case, yes.**

13 Q. Okay. And you used the simple formula for
14 defoliation?

15 **A. Yes.**

16 Q. Okay. Well, let's go to page 37. What's
17 this?

18 **A. Where?**

19 Q. Appendix B, page 37.

20 **A. Okay.**

21 Q. Okay. Does this reflect use of the simple
22 formula or the complex formula?

1 **A. Complex.**

2 Q. So you did not use the simple formula for
3 defoliation?

4 **A. Just a second.**

5 These are the formulas I used to calculate
6 the data. Whether -- where we were looking at
7 three-way calculations -- we simply followed the
8 formula on the three-way calculations from the
9 Colby data.

10 Q. So you've told me -- Dr. Jacobsen, I
11 apologize for pressing this point, but you've
12 testified today that at one point you used the
13 simple formula for yield -- I'm not done with my
14 question.

15 **A. Okay.**

16 Q. Then you told me you used the complex
17 formula for yield and the simple formula for
18 defoliation. Now you're telling me you used the
19 simple formula -- I mean, the complex formula for
20 defoliation. So you've gone back and forth and I'm
21 just -- I want to get a straight answer. Which
22 formula did you use for which analysis, if you

1 know? If you're not sure, that's fine.

2 **A. I'm not sure at this point.**

3 Q. Okay.

4 Let's look at page 2 of Appendix B.

5 **A. Okay.**

6 Q. Are you there?

7 **A. Yep.**

8 Q. What is the data here? What does this
9 provide?

10 **A. The data is from Syngenta and I**
11 **believe -- well, this data is showing how to get**
12 **the yield data into a percentage so you could use**
13 **the Colby formula.**

14 Q. So are you calculating observed values for
15 purposes of plugging into Colby here?

16 **A. That's correct.**

17 Q. Okay. So looking at A1 through A7 --

18 **A. Yes.**

19 Q. -- that's observed values for each of
20 those compounds used individually?

21 **A. I believe so, yes.**

22 Q. You're looking at page 2?

1 **A. Yes.**

2 **Q. Okay.**

3 Now, you testified earlier today that when
4 you use Colby the values you get for the individual
5 compounds will be less than the Colby expected
6 value?

7 **A. Not necessarily. I don't believe I**
8 **testified to that. Can you show me in my testimony**
9 **where I said that?**

10 **Q. Well, I'm not going to be able to find it**
11 right now. So, you know, if you've got percent
12 inhibition for compound A observed value and you've
13 got percent inhibition for compound B observed
14 value and then you use those to do a Colby
15 expected, the Colby expected is going to be greater
16 than those individual values, right?

17 **A. If there's synergy, yes.**

18 **Q. No. I'm not talking -- we haven't**
19 gotten -- we haven't combined them yet, we don't
20 have an observed value for the combined yet.

21 **A. Okay.**

22 **Q. We're simply calculating the Colby**

1 expected.

2 **A. Okay. So we're talking about observed?**

3 Q. That's right. So the observed values for
4 the individual compounds --

5 **A. Yes, unless there's a negative effect --**

6 Q. -- if those are positive, when you take
7 those observed values for the individual components
8 and you plug them into Colby to get the Colby
9 expected, that number's going to be greater than
10 the individual numbers?

11 **A. Yes.**

12 Q. Okay.

13 Looking at page 2 of Appendix B for yield,
14 you have average observed values for A1 through A7,
15 right? Do you see that in the first column?

16 **A. That's using the Syngenta averages.**

17 Q. Okay. Let's focus on area 4.

18 **A. Area 4.**

19 Q. The observed values range from 112 to 141;
20 is that fair?

21 **A. Yes, that is the range.**

22 Q. Okay. So if you plug those into Colby,

1 you'd expect to get something higher than that
2 range?

3 **A. That is correct.**

4 Q. Okay. On page 3 you have the Colby
5 expected values?

6 **A. Those are Colby expected, yes.**

7 Q. For area 4?

8 **A. Yes.**

9 Q. And those are all -- those range from 100
10 to 102?

11 **A. Yes.**

12 Q. That is less than the observed values for
13 the individual components that you report on page
14 2, correct?

15 **A. Yes.**

16 Q. So --

17 **A. It's a hundred minus those**
18 **multiplications, yes.**

19 Q. So something's wrong there, isn't it?

20 **A. Something is not correct.**

21 MR. CARSON: Okay. Can we take a break.

22 (A break was had.)

1 BY MR. CARSON:

2 Q. Before we get to those exhibits, can you
3 turn to paragraph 273 of your report. It's on
4 page 104.

5 A. Yes.

6 Q. Are you there?

7 A. Yes.

8 Q. Okay. And in this paragraph you reference
9 the Oliveira patent application that's
10 Exhibit 1007, correct?

11 A. I believe so, yes.

12 Q. And as I read the paragraph, you're saying
13 that Oliveira, Exhibit 1007, illustrates that
14 there's a long-felt but unmet need in the art for
15 controlling soybean rust?

16 A. Yes.

17 Q. And you quote Oliveira to support that
18 opinion, correct?

19 A. Yes.

20 Q. Do you agree that Oliveira itself,
21 Exhibit 1007, solves the long-felt need that you
22 describe in paragraph 273?

1 **A. It certainly improved over products like**
2 **sulfur and copper that had been used earlier.**

3 **Q. So it both describes the unfelt need and**
4 **provides a solution to that?**

5 **A. Yes.**

6 **Q. Let's go to 1034 and I want to focus on**
7 **experiment 4 which starts I believe at page 10 of**
8 **24 -- I mean, 10 of 17.**

9 **A. Experiment 4, yes, I see that.**

10 **Q. Are you there?**

11 **A. Yes.**

12 **Q. Can you describe for me what's being**
13 **tested in experiment 4?**

14 **MR. FELDSTEIN: Objection, foundation.**

15 **A. This is at page 8 is what I'm looking at**
16 **right now. This is percent severity of**
17 **(indecipherable) --**

18 **THE REPORTER: I'm sorry.**

19 **A. -- Percent severity of soybean -- Asian**
20 **soybean rust, and he actually has in here**
21 **phakopsora, P-H-A-K-O-P-S-E-R-A [sic], pachyrhizi,**
22 **P-A-C-H-Y-R-R-H-I-Z-I [sic]. He has disease**

1 incidence for the untreated. We'll have to go back
2 to my -- Unizeb Gold is mancozeb. Oranis is
3 picoxystrobin. Tebufort is tebuconazole. And then
4 he shows some mixtures of mancozeb, picoxystrobin,
5 and Strides is methyl soybean oil. I believe
6 that's what it is. And then he shows basically
7 mancozeb with picoxystrobin, just a two-way mix,
8 Unizeb with tebuconazole, a two-way mix,
9 tebuconazole and picoxystrobin in a two-way mix,
10 and then a three-way mix of mancozeb,
11 picoxystrobin, and tebuconazole.

12 Q. Okay. Thank you.

13 Looking at spray 2, are you with me?

14 A. Yes.

15 Q. That's mancozeb, right?

16 A. That's mancozeb applied alone.

17 Q. Okay. And that's mancozeb at -- strike
18 that.

19 So looking at the mancozeb applied alone,
20 do you find it surprising that the mancozeb had a
21 zero percent control effect?

22 A. Absolutely.

1 Q. If we go down to spray 5. Are you with
2 me?

3 **A. Yes.**

4 Q. This is mancozeb and the QoI, correct?

5 **A. And picoxystrobin. I find it amazing that**
6 **it's zero.**

7 Q. I'm sorry. What did you say?

8 **A. I say I find that amazing that it is zero.**

9 Q. Okay. Thank you.

10 Spray 7.

11 **A. Could you wait for just a second.**

12 **Okay. Spray 7.**

13 Q. Spray 7, the percent control there was
14 zero as well, correct?

15 **A. That's correct.**

16 Q. And does that surprise you?

17 **A. Yes, it does.**

18 Q. Is it as amazing as spray 5 in terms of
19 your reaction?

20 **A. I'm really surprised.**

21 Q. Spray 7 you're really surprised?

22 **A. Yep.**

1 Q. If we go to -- hold that page. If you go
2 to Exhibit 1007, which is the Oliveira application.

3 A. Uh-huh.

4 Q. And we go to page 5, the last paragraph.

5 A. Yes.

6 Q. Are you with me?

7 A. Yes.

8 Q. He says "Combinations of Q0 inhibitors and
9 DM inhibitors are currently registered in the
10 Americas, have demonstrated 40 to 60 percent
11 control of ASR"; do you see that?

12 A. Yes.

13 Q. Does that surprise you?

14 A. That's what I normally expect if the
15 population fungus was fully sensitive to the
16 fungicides.

17 Q. Okay. So what de Oliveira describes is
18 what you would expect and what's shown in
19 Exhibit 1034 is surprising?

20 A. To me, yes. It might suggest that the
21 fungus has now become -- had become resistant.

22 Q. Would it cause you to not trust the

1 results that are reported in Exhibit 1034?

2 A. I think the main thing that I would be
3 asking about in 1034, experiment 4 was the
4 fungus -- rust fungus population at this site
5 sensitive or insensitive to the fungicides.

6 Q. If we go back -- excuse me.

7 A. What does surprise me is the mancozeb
8 alone being zero because I know of no case where
9 any fungus has become insensitive to the
10 (indecipherable) fungicides --

11 THE REPORTER: To the --

12 A. -- to the dithiocarbamate fungicides let
13 alone mancozeb which is amongst the best of the
14 dithiocarbamates.

15 Q. So does that suggest to you that the
16 values reflected here for mancozeb alone there's a
17 problem with them?

18 MR. FELDSTEIN: Objection, misstates the
19 record.

20 A. I'm surprised. The value is the value. I
21 mean, you know.

22 Q. If we go back to Exhibit 1007, page 6.

1 Are you there?

2 A. Yes.

3 Q. Paragraph 2.

4 A. Yes.

5 Q. Dr. Oliveira says "dithiocarbamates and
6 mancozeb in particular was one of the first
7 fungicides to be used for the treatment of ASR.
8 Over the years many trials have been conducted on
9 the use of mancozeb alone for the treatment of
10 ASR"; do you see that?

11 A. Yes.

12 Q. Does that seem like an accurate statement
13 to you?

14 A. Yes.

15 Q. And is that inconsistent with the results
16 we were looking at on Exhibit 1034?

17 MR. FELDSTEIN: Object to form.

18 A. It could be and that at the growth stage
19 that this was applied at, which is listed as
20 16 BBCH, that the infection was already taking
21 place because mancozeb is strictly a protective
22 fungicide. It has no curative properties at all.

1 **So if they had infection before the spray, I**
2 **wouldn't expect mancozeb to work, but I don't know.**
3 **He doesn't detail whether there was infection**
4 **before the spray or after the spray.**

5 Q. Well, let me ask you this. Would you say
6 that Q0 inhibitors and DM inhibitors are the first
7 line of defense against soybean rust?

8 A. They've been shown to be amongst the most
9 effective.

10 Q. Exhibit 1007 --

11 A. But let me finish the answer. There's
12 also information in the literature that -- I
13 believe the term resistant would be wrong, but in
14 some rust populations they've become increasingly
15 insensitive.

16 Q. If we go back to Exhibit 1007, page 5. We
17 looked at this before. Do you see that discussion
18 in the last paragraph?

19 A. Yes.

20 Q. And then it continues at the top of
21 page 6?

22 A. Yes.

1 Q. And Dr. Oliveira says dithiocarbamates and
2 mancozeb in particular was one of the first
3 fungicides to be used for the treatment of ASR?

4 **A. Yes.**

5 Q. Do you -- in your view do you think it
6 would be obvious to combine both dithiocarbamates
7 and mancozeb to control soybean rust?

8 **A. Mancozeb is a dithiocarbamate fungicide.**

9 Q. Would it have been obvious to combine DM
10 inhibitors and QO inhibitors to control soybean
11 rust?

12 MR. FELDSTEIN: Object to form, incomplete
13 hypothetical.

14 **A. If one were dealing with populations that**
15 **were becoming insensitive, making a combination of**
16 **two different modes of action would make sense.**

17 Q. (Inaudible)?

18 THE REPORTER: Sorry?

19 MR. FELDSTEIN: Objection, misstates the
20 testimony.

21 THE REPORTER: I didn't get the question.

22 MR. CARSON: I said, Dr. Jacobsen, you

1 testified -- strike all that. Start over again.

2 So you just testified that it would make
3 sense, and my question was whether it would be
4 obvious.

5 MR. FELDSTEIN: Objection, misstates
6 testimony, asked and answered.

7 **A. I qualified my answer. If the rust**
8 **population was becoming insensitive. If they were**
9 **not becoming insensitive, why spend the extra money**
10 **to add another product?**

11 Q. What about combining DM inhibitors, Q0
12 inhibitors, and mancozeb, would that be obvious to
13 control soybean rust?

14 MR. FELDSTEIN: Objection, form, legal
15 conclusion, incomplete hypothetical.

16 **A. And I would give the same answer I just**
17 **gave.**

18 Q. Which is would it make sense in some
19 circumstances?

20 MR. FELDSTEIN: Objection.

21 **A. Yes. If you had a rust population that**
22 **was becoming insensitive to a single mode of action**

1 **fungicides, yes.**

2 MR. CARSON: Okay. I don't have any more
3 questions. Thank you, Dr. Jacobsen.

4 MR. FELDSTEIN: Let's go off the record
5 and take a break and decide what we're going to do.

6 (A break was had.)

7 MR. FELDSTEIN: We have no questions for
8 you, Dr. Jacobsen. Thank you. We can go off the
9 record.

10 (Whereupon, at 6:02 p.m. the
11 taking of the instant
12 deposition ceased.)

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1 CERTIFICATE OF REPORTER

2 I, Tina M. Alfaro, Certified Realtime
3 Reporter and Notary Public within and for the
4 District of Columbia, the officer before whom the
5 proceedings were taken, do hereby certify that the
6 foregoing transcript is a true and accurate record
of these proceedings; that said proceedings were
taken in Stenotype note by me on the 10th day of
January 2024, commencing at 8:45 a.m. and ending at
6:02 p.m.

7 I further certify that present on behalf
8 of Party Syngenta were Charles Carson and David
9 Klecyngier of Bakerhostetler and on behalf of Party
UPL were Mark Feldstein and Kenneth Guerra of
Finnegan, Henderson, Farabow, Garrett & Dunner,
LLP.

10 I further certify that I am not related
11 to, nor associated with any of the parties or their
12 attorneys, nor do I have any disqualifying
13 interest, personal or financial, in the actions
within.

14 Dated this 12th day of January 2024 in
Washington, DC.

15

16 My commission expires:
17 October 31, 2024

18

19

20

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DISTRICT OF COLUMBIA

21

22

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