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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

- - - - - X

INARI AGRICULTURE, INC.,
Petitioner,

v.

Case IPF2024-01014

Patent 8,901,378

CORTEVA AGRISCIENCE LLC,
Patent Owner.

- - - - - X

DEPOSITION of ARON SILVERSTONE, Ph.D.

Friday, March 7, 2025 - 9:02 a.m.

Taken at:

Wolf Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts

COURT STENOGRAPHER:

Katherine A. Tevnan, RMR/CSR

Henderson Legal Services

202-220-4158

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I N D E X

Deposition of: Direct Cross Redirect Recross
ARON SILVERSTONE, PhD
By Ms. Sommers 5

E X H I B I T S

No.	Page
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** Documents quoted on the record are transcribed
as read.

1 P R O C E E D I N G S

2

3 ARON SILVERSTONE, Ph.D.

4

5 a witness called for examination by counsel for
6 the Defendant, being first duly sworn, was
7 examined and testified as follows:

8

9 DIRECT EXAMINATION

10 BY MS. SOMMERS:

11 Q. Good morning, Dr. Silverstone.

12 A. **Good morning.**

13 Q. I'm Erin Sommers from Finnegan Henderson,
14 and I have my colleague with me, Kathleen Daley,
15 today. Okay?

16 You've been deposed before?

17 A. **Yes, I have.**

18 Q. Do you understand that you're under oath
19 today?

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

21 Q. And you'll testify truthfully?

22 A. **Yes, I will.**

23 Q. Okay. If I ask a question that you don't
24 understand, will you ask for a clarification?

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1 **A. Yes, I will.**

2 Q. Is it fair, if you don't ask for
3 clarification, that I understand you understand
4 the question?

5 **A. Yes.**

6 Q. Okay. I'm going to give you what has
7 been marked on the record as exhibit -- Inari
8 Exhibit 1001 and Inari Exhibit 1007.

9 Is Exhibit 1007 your declaration in this
10 proceeding?

11 **A. Yes, it is my declaration.**

12 Q. And if we can turn to the last page of
13 that -- well, not quite the last page. So before
14 your Appendix A, page 74. Is that your signature
15 on page 74?

16 **A. It is my signature.**

17 Q. And you signed this document on June 13,
18 2024?

19 **A. Yes, I did.**

20 Q. Before signing it, did you review it?

21 **A. Yes, I did review it.**

22 Q. Does this declaration that is
23 Exhibit 1007 reflect your opinions that you are
24 providing in this proceeding?

1 **A. Yes, it does.**

2 Q. Okay. Any changes, sitting here today,
3 to your declaration?

4 **A. No, I don't have any changes.**

5 Q. No typos or anything like that?

6 **A. None that I noticed. That doesn't mean**
7 **there aren't any, but --**

8 Q. Okay. Fair enough. And if we look at
9 Exhibit 1001, the other document I gave to you,
10 what is your understanding of what Exhibit 1001
11 is?

12 **A. Exhibit 1001 is the event patent for**
13 **TC1507.**

14 Q. And when you refer to the TC1507 event,
15 what are you referring to?

16 **A. Can you restate the question?**

17 Q. Um-hmm. When you use -- you used the
18 word, "This is the event patent for TC1507,"
19 correct?

20 **A. Yes.**

21 Q. Okay. What is your understanding of what
22 TC1507 is?

23 **A. TC1507 is the corn plant described in**
24 **this patent.**

1 Q. And how, for example, is TC1507 corn
2 plant distinguished from another corn plant that
3 is not a TC1507 corn plant?

4 **A. Is there a part of my declaration that**
5 **you want to refer to this?**

6 Q. No. I just want to understand how to --
7 so you --

8 **A. Yeah. Sorry. So could you repeat the**
9 **question?**

10 Q. Sure. Certainly.

11 How would one distinguish what is a
12 TC1507 corn plant compared to one that is not a
13 TC1507 corn plant?

14 **A. In this patent, they describe the genetic**
15 **insertion in this TC1507 event.**

16 Q. Okay. And how does that genetic
17 insertion distinguish from an event that is not a
18 TC1507 event?

19 **A. If I can find the description in here.**

20 **In the patent, I don't see it labeled for**
21 **this image on the second page. But on the image**
22 **of the second page, there is a schematic for what**
23 **the foreign and other genetic elements in the**
24 **insertion R, and on subsequent pages there are**

1 **the DNA sequences assigned to these different**
2 **regions.**

3 Q. Okay. So if we take a look -- just for
4 the record, you're looking at the page of
5 Exhibit 1001 that has a schematic that says "full
6 length insert" at the top?

7 A. **Yes. It says "full length insert" at the**
8 **top.**

9 Q. Okay. If we could turn to column 85 in
10 the claims of Exhibit 1001. I'd like you to take
11 a look at claim 1.

12 A. **I see claim 1.**

13 Q. Okay. Is it your understanding that the
14 TC1507 event, as you understand it, is covered by
15 claim 1?

16 A. **Yes. Claim 1 describes the TC1507 event.**

17 Q. So if we talk about TC1507 event today,
18 can we both understand that we're talking about a
19 corn plant that is covered by claim 1?

20 A. **Yes.**

21 Q. And then if you look at claim 2, it says,
22 "The corn plant of claim 1, wherein the corn
23 plant is a seed." Do you see that?

24 A. **I see that.**

1 Q. Is it your understanding that a seed can
2 also possess the TC1507 event?

3 A. Yes, a seed can possess the TC1507 event.

4 Q. And what does that mean, it has the
5 genetic material that's described in claim 1 in
6 the seed?

7 A. Yes. The seed, in its DNA, has the --
8 what is described in claim 1.

9 Q. And what is the purpose of the DNA that
10 is described in claim 1?

11 A. Can you rephrase the question?

12 Q. Um-hmm. Do you know what the DNA that's
13 present in the TC1507 event confers to the corn
14 plant?

15 A. If I can refer back to the full length
16 insert --

17 Q. Um-hmm.

18 A. -- graphic. Part of what is there is a
19 Cry1F gene that confers insect resistance and a
20 PAT gene that confers herbicide resistance -- I
21 should say herbicide tolerance.

22 Q. I'm trying to get my nomenclature right,
23 just to make sure I'm saying the right thing. If
24 I say a seed possesses the TC1507 event, is that

1 how somebody in the field would say it, or is
2 there a better way to say it?

3 **A. That's -- I'm trying to think what would**
4 **be a -- I think that's a fine -- that's okay.**
5 **That's -- I can't think of a better way off the**
6 **top of my head, so that --**

7 Q. Okay. Well, if you think of a better
8 way, please feel free to correct me, because I
9 want to make sure we're talking in the way that a
10 person in the field would speak.

11 If you had a seed in your hand that
12 possessed the TC1507 event, how would you go
13 about making another corn plant that has that
14 same TC1507 event?

15 **A. If I had a seed and I wanted to create a**
16 **corn plant, I would plant the seed in growing**
17 **medium and allow it to grow.**

18 Q. Okay. And that plant that would grow
19 would also possess the TC1507 event?

20 **A. Yes, it would.**

21 Q. From that plant that you grew from a TC57
22 seed -- I'm sorry. I think I said the wrong --
23 let me start over.

24 The plant that you grew from a seed that

1 possesses the TC1507 event, could you make
2 another corn plant?

3 **A. If you grow the seed and allow it to set**
4 **seed, you could produce more seeds that have the**
5 **TC1507 event.**

6 Q. And if you set seeds that have the TC1507
7 event, how would you produce another corn plant
8 from them?

9 **A. So if you harvest seeds from that plant,**
10 **you could plant those seeds and grow plants from**
11 **those seeds.**

12 Q. So if you harvest seeds from a corn plant
13 that has the TC1507 event, you would expect those
14 seeds to also possess the TC1507 event?

15 **A. Not all of them.**

16 Q. How many?

17 **A. Well, it depends on whether your initial**
18 **seed had two copies, meaning TC1507 insert in**
19 **both chromosomes or not, and how you pollinate**
20 **the plant you grow up.**

21 Q. You mentioned that it depends on whether
22 there's TC1507 in both chromosomes, correct?

23 **A. Yes.**

24 Q. Are you aware of whether seeds sold from

1 Corteva or another distributor of TC1507 seeds
2 sell seeds that has TC1507 in both chromosomes?

3 **A. I'm not familiar with the seed production**
4 **system that Corteva uses, so I don't know if they**
5 **have it in both chromosomes or just one.**

6 Q. Is there an industry standard as to one
7 or the other?

8 **A. I don't want to speak for all of**
9 **industry, but from my experience in Syngenta,**
10 **usually there would only be one copy.**

11 Q. Okay. And why is that?

12 **A. For many, though not -- for many**
13 **transgenic plants, a single copy confers the**
14 **agronomic traits or other traits that you need.**

15 Q. Is there any disadvantage to having two
16 copies in the chromosome?

17 **A. Not in general. There can be.**

18 Q. What are those?

19 **A. It's more difficult to breed two copies.**

20 Q. In what way?

21 **A. You need to have the trait in both lines**
22 **for hybrid production.**

23 Q. If you had a seed, a TC1507 seed, that
24 had a single copy of the event in the chromosome,

1 how would you breed that seed?

2 **A. Could you restate the question?**

3 Q. Um-hmm. Is there something about it that
4 you didn't understand completely?

5 **A. Yes. So you asked, how would you breed**
6 **it? How would you breed it for what? Are you --**

7 Q. I guess maybe I don't understand what
8 you're asking.

9 **A. So I guess, are you breeding it into new**
10 **lines?**

11 Q. Okay. Let's go with that. So if you had
12 a TC1507 seed and you wanted to breed it into a
13 new line, how would you do that?

14 **A. I would -- well, I would grow the plant**
15 **up, and then I could use it as either for -- as a**
16 **pollen donor, so to take the pollen from the**
17 **TC1507 plant and put that on to the silks of the**
18 **plant you want to breed with, or you can do the**
19 **reverse and use pollen from another plant on to**
20 **the TC1507 plant.**

21 Q. And then once the pollen from the TC1507
22 plant is put on the silks from the line that you
23 would like to breed with, it produces seeds; is
24 that correct?

1 **A. Yes. The plant that you put, the -- you**
2 **put the pollen on to the silks, that plant would**
3 **produce seed.**

4 Q. Okay. So the pollinated plant produces
5 seeds, correct?

6 **A. Yes.**

7 Q. And would those seeds in the pollinated
8 plant possess the TC1507 event?

9 **A. It depends on whether the first plant had**
10 **two copies of TC1507 or one copy of TC1507.**

11 Q. Let's start with the first -- first
12 scenario. If the original plant had two copies
13 of TC1507, would the pollinated seeds have the
14 TC1507 event?

15 **A. Yes. The pollinated seeds would have the**
16 **TC1507 event.**

17 Q. And the second scenario that you
18 mentioned, if the plant that was used to
19 pollinate had one copy of the TC1507 event, would
20 the seeds from the pollinated plant also possess
21 the TC1507 event?

22 **A. If the first plant only had one copy,**
23 **then the seeds from the pollinated event, only**
24 **half of them would have the TC1507 event.**

1 Q. And if that occurred and you wanted to
2 obtain a seed that had the TC1507 event, how
3 would you select those seeds?

4 A. When are you -- like, what time are you
5 talking about, today or a different year?

6 Q. Does it -- does it change?

7 A. It depends on the year.

8 Q. Okay. Let's talk about in 2003. How
9 would you know -- how would you know which half
10 has the TC1507 event?

11 A. In 2003 and I am a POSA?

12 Q. Yes.

13 A. It would be more challenging then because
14 I would not have all the tools I had today. I
15 would grow up plants from this harvested seed
16 from the pollinated plant, and I would take leaf
17 samples from each plant and use -- I believe
18 there were tests available in 2003, and I would
19 use those tests on each plant.

20 Q. What tests are you referring to?

21 A. If I can refer to my -- look in my
22 declaration.

23 Q. Of course.

24 A. I probably should have asked when in 2003

1 **you were asking about.**

2 Q. Again, does it make a difference when in
3 2003?

4 A. **In paragraph 141 I have several citations**
5 **on the abil- -- on the ability of tests or test**
6 **kits to identify TC1507. I don't remember what**
7 **month those were available. So if it were before**
8 **those were available, the description of how you**
9 **would test I just gave you would not be correct.**

10 Q. Okay. I understand. So if we look at
11 paragraph 141 in your declaration, the first test
12 kit that you've identified is -- is an
13 Exhibit 1045; is that right?

14 A. **I cite a test kit in Exhibit 1045.**

15 Q. Okay. And that -- that, you have
16 indicated in your declaration, is from an
17 August 2003 SEC filing; is that right?

18 A. **That is correct.**

19 Q. And you stated that it's -- that
20 August 2003 SEC filing noting the availability of
21 a test "able to detect in only 10 minutes one
22 Cry1F Herculex 1 corn kernel in 600 non-Cry1F
23 Herculex corn kernels."

24 Do you see that?

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

2 Q. So is it your understanding as of
3 August 2003 that there would have been a test kit
4 available to test for the TC1507 event?

5 **A. Yes. It is my understanding that it**
6 **would be available by August of that year.**

7 Q. Okay. Besides the documents that you
8 referred to in paragraph 141 of your declaration,
9 do you have any independent knowledge as to when
10 those test kits became available?

11 **A. No, I don't have any independent**
12 **knowledge of those test kits.**

13 Q. So if we are at a point in time, that is,
14 let's say, October 2003, you would be able to
15 test the leaf samples with these test kits to
16 identify whether the progeny has the TC1507
17 event; is that correct?

18 **A. You are asking me about the test kits**
19 **described in Exhibit 1045?**

20 Q. I am asking about any test kits that were
21 available after the August 2003 time period.

22 **A. Yes. If they were available for the**
23 **other citation. I don't know if they were**
24 **available by August. But for the ones that are**

1 **available, you could use those.**

2 Q. Okay. And then once you used a test kit
3 to identify whether the TC1507 event was present
4 or not in the seeds from the pollinated plant, is
5 there something you could do to breed those seeds
6 such that all of the progeny would be expected to
7 have TC1507?

8 A. **So one correction. I said I would be**
9 **testing the plants, not the seeds.**

10 Q. Okay.

11 A. **So you would be -- so is your question**
12 **about the plants or testing the seeds?**

13 Q. Okay. Let's make sure we are both on the
14 same page here. So if you test the plants and
15 the plants themselves have TC1507, what would
16 that tell you about the seeds in that plant?

17 A. **The seeds in -- sorry to be pedantic.**
18 **The seeds in the plants growing now?**

19 Q. The seeds in the plants from which you
20 took the leaf samples, what would your
21 expectation be about the seeds in those plants
22 and TC1507?

23 A. **Because I had started with an original**
24 **TC1507 plant that had only one copy of the**

1 **insert, any plants that were positive for TC1507**
2 **would also only have one copy. And then for the**
3 **seed you harvest from those plants it depends on**
4 **where the pollen is coming from.**

5 Q. Okay. And would -- if the pollen is
6 coming from a plant that does not have any TC1507
7 event in it, what would your expectation be for
8 the seeds of that plant?

9 A. My expectation, then, is if it's getting
10 pollen from another plant that does not have
11 TC1507, half the seeds should have TC1507.

12 Q. Is there a name for this process of
13 breeding a TC1507 event into another -- another
14 corn line?

15 A. I guess it depends what type of breeding
16 you are doing, whether you are -- I mean, just if
17 it's just for line improvement, it could just say
18 breeding or forward breeding.

19 Q. Okay. So you mentioned "forward
20 breeding."

21 Is there another type of breeding that's
22 called back breeding?

23 A. More commonly we talk about
24 introgression. If you want a new line to only

1 **have the TC1507 DNA and very little DNA from the**
2 **original TC1507 event, that often is called**
3 **introgression.**

4 Q. And how does that differ from the
5 scenario we just discussed?

6 A. Introgression usually envisions several
7 generations of breeding to isolate -- to ensure
8 that only or -- most -- the vast majority of the
9 DNA is from the original line and only the TC1507
10 insertion is from the original TC1507 event.

11 Q. So if I understand correctly, depending
12 on the type of breeding you're doing, the
13 resulting corn plants will possess the TC1507
14 event and some level of either original DNA or
15 DNA from the corn line into which it's being
16 bred; is that correct?

17 MR. STEENBURG: Objection. Form.

18 A. If I can resummarize. When you are doing
19 breeding, you always get some DNA from the
20 original line, depending on how many generations
21 and how you are doing it, and you'll have DNA
22 from the line that you've bred into.

23 Q. And in any scenario, if the DNA that's
24 described that we talked about as being the

1 TC1507 event is present, you still consider that
2 a corn plant to have the TC1507 event; is that
3 right?

4 **A. As long as the TC1507 event insertion DNA**
5 **there, yes, that is considered a TC1507 plant.**

6 Q. And that plant could have more from the
7 original TC1507 line of DNA; is that right?

8 **A. Can you rephrase more -- more than or --**

9 Q. Well, fair. What I'm trying to get at is
10 you're not relying on the rest of the plant's DNA
11 to determine whether it possesses a TC1507 event
12 or not outside the construct we've already
13 discussed?

14 **A. Yes. I would only be looking at the**
15 **con- -- well, the insert that's on the first**
16 **figure on the patent to determine if a plant is a**
17 **TC1507.**

18 Q. A few answers ago you said that time
19 matters because it would be more difficult
20 because you don't have all the tools in 2003.

21 Do you remember that?

22 **A. Yes.**

23 Q. What were you referring to?

24 **A. The kits I cited on paragraph 141 are all**

1 **antibody-based kits. So I guess, what year do**
2 **you want to say is later for my comparison?**

3 Q. I guess whenever the compare -- it
4 changes.

5 A. After -- what I've referred to in my
6 **declaration as Barbour patent publication**
7 **publishes, that includes a description of**
8 **DNA-based kits or DNA-based tools that could be**
9 **used after the publication of this document.**

10 Q. So it's your position that those
11 DNA-based tools were not available before the
12 publication of the Barbour reference?

13 A. I am not aware that they were available
14 **to a POSA before that publication.**

15 Q. Dr. Silverstone, I'm going to hand you
16 Exhibit 1009.

17 Is that the Barbour reference you were
18 just referring to?

19 A. Yes, it is the Barbour reference I was
20 **referring to.**

21 Q. And could you point me to the DNA-based
22 kits you are referring to that were disclosed in
23 the Barbour reference?

24 A. I will need to take a little bit of time

1 to -- on page 45 starting -- do you need me to
2 wait? Page 45 or column 45.

3 Q. Okay. I'm there.

4 A. Starting with claim 6, the Barbour
5 publication lists a number of kits that could be
6 used.

7 Right now I haven't had time to really
8 look to see which I would call -- which ones
9 might be best or which ones might be used or
10 whether all would be used. But when talking
11 about the molecular kits, that is what I was
12 referring to.

13 Q. And looking at claim 6 of the Barbour
14 publication, which is Exhibit 1009, how do you
15 know that that is a DNA-based kit?

16 A. I would -- without going back and
17 referring to it, what tells me in the claim --
18 sorry. Was it claim 6 that you said?

19 Q. Um-hmm. That's the one you pointed to,
20 yeah.

21 A. Because it says the kit comprising at
22 least one primer which recognizes a sequence in
23 SEQ ID NO:21 or within SEQ ID NO:22. A primer is
24 a piece of DNA.

1 Q. And you're not aware that any DNA-based
2 kits were available before this Barbour
3 publication to evaluate the TC1507 event,
4 correct?

5 A. I can't -- right now I don't -- yes, I
6 think this is when the POSA would be aware of
7 kits available to identify the TC1507 event.

8 Q. And the kits that you identified in
9 paragraph 145 of your declaration and the
10 exhibits cited therein, those are antibody-based
11 kits; is that right?

12 A. So in paragraph 141, I would need to look
13 at each one of them to make sure I'm not
14 misspeaking.

15 I know that certainly exhibit -- the
16 Exhibit 1045 reference is to an antibody kit.
17 And Exhibit 1044, I would want to look again at
18 the document to confirm. And Exhibit 1051 is
19 clearly talking about an antibody kit.

20 For the other two exhibits, I have not
21 reviewed those in preparation for today. So to
22 be fair to my memory, I would want to review
23 those to confirm that -- whether they are
24 antibody or not.

1 Q. You indicated that the kit in
2 Exhibit 1051 is clearly an antibody kit. Why is
3 that your conclusion?

4 A. 1051, I wrote, "October 2003 article
5 noting availability of 'QuickStix' test to detect
6 Herculex." These stick tests are antibody based.

7 Q. How, if at all, did the DNA-based
8 detection kits for TC1507 make detection of that
9 event easier?

10 A. It allows you -- DNA-based detection
11 allows you to do more tests at the same time, and
12 they are specific -- they can be, depending on
13 which of these kits you use, and right now I
14 can't say exactly which ones, but they can be
15 specific for the event, whereas the antibody test
16 only detect the Cry1F protein.

17 Q. In 2003, was there a way, a method, to
18 sequence the DNA of a corn plant to know whether
19 you have the TC1507 event or not?

20 A. Are you asking if you're a POA and do
21 not know the sequence of the TC1507 insert?

22 Q. No. If you -- if you know the sequence
23 of the TC1507 insert in 2003, is there a way that
24 you could sequence the DNA in a plant and know if

1 that TC1507 insert matches up?

2 **A. If you knew the DNA sequence of the**
3 **TC1507 insert as described on the patent, which**
4 **includes the flanking regions -- and you're**
5 **saying including the flanking region?**

6 Q. Correct.

7 **A. Then, yes, you would be able to design**
8 **detection tools for the TC1507 event.**

9 Q. And confirm whether a plant has the
10 TC1507 event or not, correct?

11 **A. And then you can use those tools to**
12 **confirm the presence of TC1507 in a plant or not.**

13 Q. Okay. I'm going to hand you what's
14 previously been marked as Exhibit 1006. Are you
15 familiar with this document?

16 **A. I reviewed it for writing my declaration,**
17 **but I have not read it since then. So I don't**
18 **have much memory of what's in it right now today.**

19 Q. Please just look at your "Materials
20 Considered" list, just to orient you in your
21 declaration --

22 **A. Yes.**

23 Q. -- and Exhibit 1006.

24 Do you see that that says it's a

1 non-provisional application, then it gives an
2 application number. And that's what you called
3 the "April 2004 Application"? Do you see that?

4 **A. Yes.**

5 Q. Okay. Do you understand this is the
6 patent application that was filed in April 2004
7 for the TC1507 event?

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

9 Q. I know that there are a couple of
10 additional documents just for formality reasons
11 in that exhibit to file to the PTO. For the
12 specification itself, is it your understanding
13 that that is the same as what is in the
14 publication of Barbour in Exhibit 1009?

15 **A. My understanding is that Barbour is the**
16 **publication of the patent application.**

17 Q. And sitting here today, are you aware of
18 any significant differences between those two
19 documents?

20 **A. I am not aware of any significant**
21 **differences.**

22 Q. Okay. I'd like to turn back then to
23 Exhibit 1009. Okay?

24 Okay. If we could look at the schematic

1 that we've been looking at. This one is on the
2 second page of the document. It says Figure 1
3 underneath. Do you see that?

4 **A. I see that.**

5 Q. Does this include the DNA for the
6 TC1507 event?

7 **A. Yes. Figure 1 includes the DNA for the**
8 **TC1507 event.**

9 Q. And then if we look at -- if we go to
10 page 32.

11 **A. Okay. Page 32.**

12 Q. Yeah. 32 provides the sequence for
13 sequence 25; is that right?

14 **A. Yes. It's the beginning of the sequence**
15 **ID for No. 25.**

16 Q. All right. And on page 34, that provides
17 the beginning sequence ID for 26; is that right?

18 **A. You said page 34?**

19 Q. I did.

20 **A. Oh, I see at the bottom. Yes, at the**
21 **bottom, it's the start of SEQ ID NO:26.**

22 Q. Okay. And then on page 36, that provides
23 the sequence ID for sequence 27; is that right?

24 **A. On page 36, it has the start of**

1 **SEQ ID NO:27.**

2 Q. Okay. So in the application that was
3 filed in April 2004, the DNA sequence for the
4 TC1507 event was provided, correct?

5 A. **Yes. This application has the sequence**
6 **of the TC1507 event.**

7 Q. I'd like you to take a look at examples,
8 starting with Example 2.

9 A. **On what page?**

10 Q. I'm on page 10 of Exhibit 1009.

11 A. **I see Example 2.**

12 Q. If you take a look at Example 2 through
13 Example 10, which ends on page 20.

14 A. **You want me to read through all those? I**
15 **can. Or --**

16 Q. Why don't I go ahead and ask my question,
17 and then you can decide how much you need to read
18 through.

19 Looking at Examples 2 through 20, are
20 these the types of protocols that you were
21 referring to in being able to develop tools to
22 identify whether a TC1507 event has occurred or
23 not?

24 A. **Well, to answer your question, yes, I do**

1 **need to read through all of them.**

2 Q. Okay. Go ahead.

3 (Pause)

4 Q. I think I might have misspoke too.

5 There's not 20 examples. 2 through 10 --

6 **A. 2 through 10.**

7 Q. -- on page 20. So just --

8 **A. Okay.**

9 (Pause)

10 **A. I've reviewed them briefly. Can you**
11 **repeat your question for me again?**

12 Q. Of course.

13 Having now looked through examples 2
14 through 10 in the Barbour publication, are those
15 the types of protocols that you were referring to
16 being able to develop to identify the TC1507
17 event by DNA?

18 **A. So I won't say that every single one**
19 **has -- it can be used, but within these -- you**
20 **know, I just briefly reviewed them. Within**
21 **these, there is information that I was referring**
22 **to that you could use to develop those tools.**

23 Q. So if one were to follow the information
24 in the Barbour publication in some of the

1 examples 2 through 10, you could identify whether
2 the TC1507 event DNA was present in a plant or
3 not?

4 **A. Yes, you could use some of these tools to**
5 **identify TC1507 events.**

6 Q. And that information was part of the
7 original application in April 2004, correct?

8 **A. Yes. This was part of the original**
9 **application.**

10 Q. So if a person had a seed, corn seed, in
11 2003, and let's go after August, so after
12 August 2003, he would be able to assess whether
13 that seed possessed the TC1507 event using DNA
14 techniques, correct?

15 **A. If they had the information in this**
16 **application, they could assess the seed.**

17 Q. And if the seed had the TC1507 event in
18 2003, one could plant it and grow another corn
19 plant that has the TC1507 event, correct?

20 **A. Let me go back to your previous question.**
21 **So you asked if they were assessing the seed or a**
22 **plant grown for the seed for the TC1507 event on**
23 **your previous question? Because you asked about**
24 **seed -- testing a seed.**

1 Q. I asked about testing a plant, and you
2 said yes.

3 **A. Oh, sorry. You asked about testing a**
4 **plant. Yes.**

5 Q. That was one question. Then the question
6 I just asked before the one we are on was: If a
7 person had a seed, a corn seed, in 2003, he would
8 be able to assess whether that seed possessed the
9 TC1507 event using DNA techniques, correct?

10 **A. That's correct. But if you're testing**
11 **the seed without growing it into a plant, it's**
12 **destructive testing.**

13 Q. Okay. But you could still test for it;
14 is that right?

15 **A. Yes, you could test that seed.**

16 Q. What do you mean by "destructive
17 testing"?

18 **A. What I mean is, if you have a seed and**
19 **you want to know if that has the event, you could**
20 **grind up the seed and test it, but then it's no**
21 **longer viable, which is what I mean by**
22 **destructive testing.**

23 Q. Okay. I understand. If I change my
24 question to: In 2003, one could test a corn

1 plant to determine whether there was a TC1507
2 event if he had the information in the
3 Exhibit 1009; is that correct?

4 **A. Yes. If they had the information in**
5 **Exhibit 1009, they would be able to test the**
6 **plant.**

7 Q. And if that test identified that the
8 plant possessed the TC1507 event, we've already
9 established that another corn plant could be
10 grown to also possess the TC1507 event from that
11 corn plant, correct?

12 **A. That is correct. Yes.**

13 Q. And that could occur in 2003, right?

14 MR. STEENBURG: Objection to form.

15 **A. I will ask, then, again, specific about**
16 **the month that you are doing this, because as**
17 **corn plants take -- to go from seed to seed takes**
18 **90 -- depending on the variety, 90, 120 longer.**
19 **So if you are planting -- we talked about August,**
20 **it may be 2004 before you are in the next**
21 **generation.**

22 Q. Okay. If you tested in August 2003 with
23 DNA techniques and had a corn plant that had the
24 TC1507 event, and you wanted to generate another

1 corn plant that has the TC1507 event in it, would
2 you have an expectation that you could do that?

3 **A. Yes. You would have the expectation that**
4 **you could do that.**

5 Q. For all of the processes that we
6 discussed so far today?

7 **A. As we talked about the testing tools,**
8 **yes.**

9 Q. You mentioned the corn cycle and the corn
10 growing season. What is the -- what's the
11 typical start in the U.S. for the corn growing
12 season?

13 **A. It depends on the latitude. So --**

14 Q. What's the earliest when seeds would be
15 planted in the United States in a typical growing
16 season?

17 **A. The earliest -- and it would be in the**
18 **spring in the south because corn has to be**
19 **planted after frost. I don't remember when last**
20 **frost is in the south.**

21 Q. Do you have an approximate month?

22 **A. I can tell you in North Carolina.**

23 Q. Okay. In North Carolina in a typical
24 growing season, when do the farmers plant their

1 corn?

2 **A. The last frost date in North Carolina is**
3 **April 15th. So farmers would be planting after**
4 **that.**

5 Q. And then when typically is the harvest of
6 that corn in North Carolina?

7 **A. Harvest is usually in the fall. It**
8 **depends on the variety of corn, because corn --**
9 **different varieties of corn, need different**
10 **lengths of time to mature.**

11 Q. Do you have an approximate timeframe?

12 **A. I would say fall, September, October.**
13 **But I'm just speculating.**

14 Q. And once that corn is harvested in
15 September or October, approximately, in North
16 Carolina, what's your understanding of when that
17 is then sold to the end user?

18 MR. STEENBURG: Objection to form.

19 **A. So I don't know specific the corn sales**
20 **in North Carolina, but in general I'm aware of**
21 **the commodity system in the United States. And**
22 **depending on storage onsite on a farm, corn can**
23 **be sold anywhere from immediately after harvest**
24 **to 3, 6, 9, 12 months later.**

1 Q. We've been going about an hour. Would
2 you like a break?

3 A. Yeah, that would be good. Thanks.

4 **(Recess taken)**

5 BY MS. SOMMERS:

6 Q. Dr. Silverstone, I would like to turn to
7 page 47, paragraph 107, in your declaration.
8 That was Exhibit 1007.

9 A. Repeat the paragraph.

10 Q. Certainly. 107.

11 A. I see paragraph 107.

12 Q. In that paragraph you indicate that
13 Example 1 in the April 2004 application describes
14 how the TC1507 event itself was generated,
15 correct?

16 A. Yes.

17 Q. And that was by bombarding the corn
18 embryos with the transgene insert?

19 A. Yes.

20 Q. You go on to say, "It does not even
21 attempt to disclose how others could
22 independently reproduce TC1507."

23 Do you see that?

24 A. I see that.

1 Q. You're not saying -- let me ask a better
2 question.

3 When you -- when you indicate that it
4 doesn't disclose how others could independently
5 reproduce, you are talking about reproducing it
6 by the same bombardment method, right?

7 **A. What I mean is being able to reproduce**
8 **the exact event of TC1507. Yeah.**

9 Q. I guess, is that statement, it doesn't
10 attempt to disclose how you could reproduce --
11 independently reproduce -- you are not talking
12 about if you have a TC1507 seed in hand, that you
13 wouldn't know how to make another corn plant that
14 has TC1507, are you?

15 **A. No. What I meant here is how you could**
16 **reproduce another event TC1507 starting with the**
17 **DNA.**

18 Q. And if you have the TC1507 seed in 2003,
19 as we discussed is possible, you could plant that
20 seed and grow another TC1507 plant, right?

21 **A. Yes. If you already have the seed, you**
22 **could reproduce another plant with TC1507.**

23 Q. So if you had access to the seed, you
24 would be able to practice the invention of the

1 TC1507 patent; is that right?

2 MR. STEENBURG: Objection to form.

3 A. If you -- if you have the TC1507 seed,
4 you would be able to -- yes, to reproduce a
5 TC1507 plant.

6 Q. I am handing you what's been previously
7 marked as Exhibit 1047.

8 Dr. Silverstone, is that a document that
9 you considered in forming your opinions in this
10 case?

11 A. I don't remember all of the exhibits
12 because it's been a while and I hadn't reviewed
13 this one, so I will check my appendix to make
14 sure I answer correctly.

15 Yes, this is an exhibit I used.

16 Q. On the first page of Exhibit 1047 there's
17 a stamp at the bottom left-hand side that says
18 "Memorial Library, November 21, 2002."

19 Do you see that?

20 A. Am I looking in the right place?

21 Q. Down in the bottom corner, bottom
22 left-hand corner. Do you see the red letters?

23 A. I couldn't see the red. It is a little
24 hard me to read. I see Memorial Library, yes.

1 Q. The date there says November 21, 2002.

2 A. Yes, I see that.

3 Q. Up in the right-hand corner of that first
4 page it also says November 2002; is that right?

5 A. It says November 2002, yes.

6 Q. So is it your understanding that this
7 farm journal, the Magazine of American
8 Agriculture, was available in November of 2002?

9 A. That's the date of the journal, yes. So
10 I would assume it was available.

11 Q. The library stamp says November 2002,
12 right?

13 A. Oh, yes. Thanks for reminding me. The
14 library stamp says they received it
15 November 2002.

16 Q. I'm not trying to be difficult or
17 interesting, but what is this document? Like,
18 what does it actually reflect?

19 A. Could you try to rephrase?

20 Q. Who would read this?

21 A. Who would read -- who would read this
22 magazine?

23 Q. Right.

24 A. So it would be read by people working in

1 **agriculture, for example, farmers, as well as**
2 **researchers, perhaps, industry, people working**
3 **for companies that support agriculture.**

4 Q. Would a person of ordinary skill in the
5 art, as you've defined it in your declaration, be
6 somebody who would read that type of document?

7 A. **As I defined a POSA, they would read this**
8 **type of -- yes.**

9 Q. If we turn to internal page 42 of this
10 document, I'd like to direct your attention down
11 to the third full paragraph on the left-hand
12 column, starts "corn growers"?

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

14 Q. I will read that into the record. It
15 says "Corn growers now have the option of
16 purchasing a new BT trade developed by Dow
17 AgroSciences LLC and Pioneer Hi-Bred
18 International, Inc., a DuPont company, branded as
19 Herculex 1, the trade expresses in corn the Cry1F
20 protein which is toxic to black cutworm, fall
21 armyworms, southwestern corn borer and European
22 corn borer?"

23 Did I read that correctly?

24 A. **You did.**

1 Q. Dow AgroSciences LLC, they are a patent
2 owner in this proceeding; is that right? You can
3 look at the front cover of your declaration.

4 **A. It is Corteva Agriscience.**

5 Q. Okay. Is there any relationship between
6 the two?

7 **A. I don't have the exact -- who merged with**
8 **who, but I know that at least part of Dow was a**
9 **predecessor company.**

10 Q. Of Corteva?

11 **A. Of Corteva.**

12 Q. Okay. Based on what I just read from
13 your Exhibit 1047, what would a person of
14 ordinary skill in the art have taken away from
15 that?

16 **A. A POSA would look at this and see that --**
17 **reading this with their knowledge of the**
18 **industry, as I describe in the description of the**
19 **POSA, that as described here, Dow and Pioneer are**
20 **launching a new product on the market with**
21 **Hercu- -- branded as Herculex 1.**

22 Q. And from reading this would a person of
23 ordinary skill in the art have known that
24 Herculex 1 is the TC1507 event?

1 **A. Just from what's written here?**

2 Q. Um-hmm.

3 **A. No, they would not know that -- well, let**
4 **me -- explain a little better.**

5 **It does not -- in the paragraph it does**
6 **not refer to the TC1507 event.**

7 Q. Okay. Is there another way that a person
8 of ordinary skill in the art in the end of 2000
9 -- early 2003 would have understood that Herculex
10 1 is the TC1507 event?

11 **A. They -- let me refer to my declaration**
12 **because I talk about the synonym.**

13 Q. Maybe paragraph 131 might give you some
14 help.

15 **A. Yes. Thank you. So paragraph 132**
16 **references multiple reports and articles that**
17 **used both Herculex 1 and TC1507. So reading**
18 **those exhibits that I cite, a POSA would be aware**
19 **that Herculex 1 would be the TC1507 event.**

20 Q. So somebody reading Exhibit 1047 would
21 have understood that the Herculex 1 that's being
22 referred to in it is TC1507, correct?

23 **A. Yes, that is correct.**

24 Q. In November 2002 when this farm journal

1 indicates that corn growers have the option of
2 purchasing the Herculex product, what would a
3 person of ordinary skill in the art have
4 understood about the availability of that
5 product?

6 **A. The person of ordinary skill in the art**
7 **reading this in November of 2002 would see that**
8 **there would be some seed available in -- for the**
9 **2003 season for growing in the 2003 season.**

10 Q. What is your understanding of when TC1507
11 seed was available commercially in the
12 United States?

13 **A. Do you mean commercially available when a**
14 **farmer would have it in hand?**

15 Q. What is your understanding of when a
16 farmer could first purchase TC1507 containing
17 seed?

18 **A. Well, the seed sales could have been in**
19 **2002, but delivery would only be in 2003.**

20 Q. Why are you saying delivery would have
21 only been in 2003?

22 **A. Typically corn sales begin in the fall,**
23 **but that's just ordering the seed. That's not**
24 **receiving the seed.**

1 Q. And then when are seeds typically
2 received after a sale?

3 A. Typically, they are -- they are received
4 in the spring, close to planting time.

5 Q. So a North Carolina farmer would have
6 been able to have corn seed that possessed the
7 TC1507 event before the April planting season in
8 2003?

9 MR. STEENBURG: Objection to form.

10 A. The first season would be very limited
11 sales. So I don't know that there would be
12 varieties that could grow everywhere in the
13 country.

14 There might not be varieties appropriate
15 for North Carolina, so in which case a
16 North Carolina farmer would not be able to
17 acquire the seed. But for where the seed variety
18 is appropriate, the farmer would receive it in
19 the spring.

20 Q. What is your basis for saying there would
21 be very limited sales in the first season?

22 A. In my experience, I was involved in
23 planning commercial launches for several
24 different transgenic products, and because of the

1 regulatory environment, the uncertainty on
2 approval timelines, and the cost and timing of
3 seed production, seed availability in the first
4 year is usually very limited, with growth each
5 subsequent year.

6 Q. You didn't indicate in your declaration,
7 which is Exhibit 1007, that seed launches in the
8 first year are limited, correct?

9 MR. STEENBURG: Objection. Form.

10 A. I only qualitatively describe the growth
11 of seed sales.

12 Q. Where did you do that?

13 A. I need to consult my --

14 (Pause)

15 A. One place is paragraph 133.

16 Q. Um-hmm. You've indicated that
17 "TC1507/Herculex I was available starting in the
18 2003 growing season," correct?

19 A. Yes.

20 Q. You have not indicated that it would be a
21 limited release at that time, right?

22 MR. STEENBURG: Objection to form.

23 You can answer.

24 A. In my final sentence, I quote

1 **Exhibit 1050, which I say, "Summer 2005 article**
2 **noting 'wider availability of Herculex I**
3 **insect-resistance corn hybrids," implying that**
4 **earlier years was less available.**

5 Q. Do you have any personal knowledge,
6 besides Exhibit 1050, that indicates the
7 TC1507/Herculex 1 product was of limited
8 availability in 2003?

9 A. I have -- I don't have the sales numbers
10 for these growing seasons. I just have my
11 industry knowledge.

12 Q. Did you consider any sales numbers in
13 forming your opinions in these cases?

14 MR. STEENBURG: Objection. Form.
15 You can answer.

16 A. I did not use any sales numbers.

17 Q. And you weren't personally involved in
18 the launch of the TC1507/Herculex 1 product,
19 correct?

20 A. That's correct, I was not. I have not
21 worked for Corteva or its parent companies.

22 Q. So I'd like to turn back to paragraph 107
23 in your declaration, please.

24 A. I see 107.

1 Q. Okay. And this paragraph is part of your
2 analysis in a section that starts on page 37,
3 where you went through the Wands factors to
4 confirm that the April 2004 application does not
5 enable the challenged claims; is that right?

6 **A. That is correct.**

7 Q. So your opinion in 1007 that the
8 application itself didn't -- didn't provide
9 information how to reproduce the TC1507 event by
10 the DNA insertion methods didn't take into
11 account the accessibility of the TC1507 seed
12 itself, correct?

13 MR. STEENBURG: Objection. Form.

14 **A. I considered the availability of TC1507**
15 **seed based on my industry knowledge that the seed**
16 **is sold to farmers with a technology use**
17 **agreement, and that prevents any type of research**
18 **on the -- or -- on the seed, so a POSA would not**
19 **be able to use that material.**

20 Q. So it's your position that a POSA would
21 not have been able to use the material that was
22 available in 2003; is that correct?

23 **A. A POSA would not be able to buy the seed**
24 **that is sold to farmers for growing in the field**

1 **for grain production.**

2 Q. So your determination that the TC1507
3 event was not accessible is based on a lack of
4 permission to practice the claimed invention,
5 correct?

6 **A. Could you rephrase that question?**

7 Q. Sure. Maybe I'll start with: What is
8 your opinion that the TC1507 seed was not
9 available in 2003 for the purposes of enablement?

10 **A. The reason is, as I said, that the seed**
11 **that is sold as Herculex commercially to farmers**
12 **is sold using a technology usage agreement, and**
13 **those agreements specifically exclude research**
14 **uses of the seed. So a POSA who wanted to use**
15 **that seed and -- for research would not be able**
16 **to do that.**

17 Q. So the POSA would not have been allowed
18 to do it; is that correct?

19 **A. Yes. Legally the POSA would not be**
20 **allowed to do it.**

21 Q. But the seed itself with the TC1507 event
22 was sold to farmers in 2003 and was available,
23 correct?

24 MR. STEENBURG: Objection to form.

1 **A. Yes. There was seed that was sold to**
2 **farmers.**

3 Q. With TC1507 event, correct?

4 **A. With TC1507 event in 2003.**

5 Q. Okay. So your determination as to
6 accessibility is because a POSA was simply not
7 permitted to do something; is that right?

8 **A. Yes. The POSA would not be allowed to do**
9 **the work.**

10 Q. Now, for the crops that were produced
11 with the TC1507 seed in 2003, were the same
12 restrictions applied to them once sold?

13 **A. Those restrictions, to the best of my**
14 **knowledge, were not applied to the grain that is**
15 **sold from the harvest of the farms.**

16 Q. Okay. And you have indicated a couple
17 times that you have experience in the industry;
18 is that right?

19 **A. Yes, I do have experience in the**
20 **industry.**

21 Q. And in your time at Syngenta, were the
22 crops that were sold downstream from the farmers,
23 did those end users have to sign a TUA?

24 MR. STEENBURG: Objection. Form.

1 Foundation.

2 **A. It depends on the product.**

3 Q. And how does it depend on the product?

4 **A. We had one product specifically that was**
5 **on a closed-loop system, and the -- the grain it**
6 **produced was not going into the commodity grain**
7 **stream. And that grain was going specifically**
8 **for ethenol use and was not available for outside**
9 **the closed loop.**

10 Q. In your experience for crops that are
11 sold into the commodity grain stream, must those
12 crops be sold with a TUA?

13 **A. My understanding is that the grain sold**
14 **into the commodity grain system does not have a**
15 **TUA attached to it.**

16 Q. And as we discussed earlier, that the end
17 of the growing season in 2003, sometime in the
18 fall, some of that crop would have been expected
19 to be sold immediately, correct?

20 **A. Yes. Some of that crop would have gone**
21 **into the commodity system.**

22 Q. And that would have been accessible
23 without any restrictions, correct?

24 MR. STEENBURG: Objection. Form.

1 **A. The grain in the commodity system is**
2 **accessible without restrictions.**

3 Q. Okay. So sometime in 2003, TC1507
4 possessing grain in the commodity system would
5 have been accessible without restrictions,
6 correct?

7 **A. Restrictions on use?**

8 Q. Well, you just told me that it's
9 available without restriction, so what
10 restrictions are you referring to?

11 **A. I am referring to restrictions on use.**

12 Q. Okay. So let me ask my question again.
13 Sometime in late 2003, grain in the commodity
14 system that possessed TC1507 would have been
15 accessible without restrictions for use, correct?

16 MR. STEENBURG: Objection. Form.

17 **A. That is correct. There would be grain --**
18 **there would be TC1507 grain in the commodity**
19 **system that would not have restrictions on use.**

20 Q. In 2003?

21 **A. In 2000 -- late 2003.**

22 Q. And for the purposes of the Wands factors
23 that you analyzed in your declaration from
24 pages 37 to 50, you did not take into account

1 that commodity grain without restrictions; is
2 that right?

3 MR. STEENBURG: Objection. Form.

4 **A. In this section of my declaration, I**
5 **don't take into account the commodity grain, but**
6 **I do later in my declaration.**

7 Q. Okay. So just for clarity, when you're
8 doing the Wands factors for the purposes of
9 enablement in April 2004, you did not take into
10 account accessibility of TC1507 corn plants,
11 correct?

12 **A. That's correct for when I was taking into**
13 **account the Wands factors.**

14 Q. If you had taken the accessibility of the
15 TC1507 event into account in 2003 and you had a
16 corn seed in hand with the TC1507 event at that
17 time and the application as it was filed, that we
18 went through this morning, in your opinion would
19 a person of ordinary skill in the art have been
20 able to produce another TC1507 corn plant?

21 MR. STEENBURG: Objection. Form.

22 **A. The availability of TC1507-event corn in**
23 **that time period would have been extremely**
24 **difficult to get in hand based on the low**

1 **planting acreage. I would not have considered a**
2 **POSA having availability of the TC1507 event in**
3 **hand in that timeframe.**

4 Q. Okay. You haven't provided an opinion up
5 until now that there was an extremely low
6 planting acreage for TC1507 in 2003, correct?

7 A. I have indicated that it was expanding
8 over the years, and based on industry knowledge
9 and general practices my understanding is that is
10 often the case.

11 Q. But you haven't actually said there was
12 an extremely low planting acreage for TC1507
13 anywhere in your declaration, correct?

14 A. That is correct. I did not write that in
15 my declaration.

16 MS. SOMMERS: I will just note for
17 the record that this is a new opinion by
18 Dr. Silverstone.

19 Q. You didn't look at any numbers to
20 indicate what the planting acreage for TC1507 was
21 in 2003; is that correct?

22 A. That is correct, I did not look at
23 planting acreages.

24 Q. So sitting here today, you don't actually

1 know how much TC1507 corn was planted in the 2003
2 growing season in the U.S.; is that right?

3 **A. That is correct. I cannot give you an**
4 **acreage number.**

5 Q. The only thing you know based on the
6 qualitative information in your declaration is
7 that sometime in 2005 the number was higher; is
8 that right?

9 **A. Sorry. Could you repeat the question?**

10 Q. I am just asking. You told me earlier
11 you had given a qualitative assessment that over
12 time TC1507 increased in the market; is that
13 right?

14 **A. That is correct. I indicated that over**
15 **time it increased in the market.**

16 Q. Okay. So sitting here today, the only
17 thing you know about the TC1507 acreage is that
18 the relative amount in your opinion went up over
19 time?

20 MR. STEENBURG: Objection to form.

21 **A. The -- where I cite a reference it says**
22 **it went up. So it is not just my opinion.**

23 Q. I hand you what was previously marked
24 Exhibit 1050. Is this the document you cited

1 that indicated that it went up?

2 A. Let me take a look at this document to
3 make sure I have not reviewed this document in
4 advance -- in preparation for the deposition
5 today. So let me make sure it says that.

6 Q. If helpful, you had pointed to paragraph
7 133 in your deposition previously.

8 A. Repeat your question for me.

9 Q. I am not sure I have a question -- sorry,
10 I do.

11 Is this the document you cited that
12 indicated that it went up?

13 A. Yes. I did cite this document to
14 indicate that it went up.

15 Q. Okay. And where are you looking at in
16 this document for that support for that
17 statement?

18 A. On page 19 on the top of the second
19 column.

20 Q. Um-hmm.

21 A. It says "Thanks to wider availability of
22 Herculex 1 insect resistant corn hi-breds."
23 Wider availability to me and to POA would say
24 there was -- that plantings would go up because

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1 there is more available for planting.

2 Q. Okay. This particular article also does
3 not provide any acreage with respect to what that
4 wider availability reflects, correct?

5 A. That is correct. It does not cite an
6 acreage.

7 Q. I am going to go back to the original
8 question I asked at the beginning. I understand
9 you believe that the availability of TC1507 may
10 have been somewhat limited in 2003, right?

11 A. That is correct.

12 Q. I would like you to put aside how
13 available it was at the moment and answer a
14 question.

15 If you had taken the accessibility of the
16 TC1507 event into account in 2003, and you had a
17 corn seed in hand with the TC1507 event and the
18 application as it was filed in 2004, in your
19 opinion would a person of ordinary skill in the
20 art have been able to produce another TC1507 corn
21 plant?

22 MR. STEENBURG: Objection to form.

23 A. So assuming -- if a person were able to
24 obtain TC1507 corn grain and had that in hand,

1 **which would have been difficult, they would have**
2 **been able to reproduce a TC1507 event.**

3 Q. You had mentioned -- this is the second
4 time you mentioned it is difficult.

5 What's your basis for saying it would
6 have been difficult to get the TC1507 event in
7 hand in 2003?

8 **A. The sales of products is not open**
9 **information to the public. So a POA wouldn't**
10 **necessarily know where TC1507 events were being**
11 **grown. They might make some assumptions. But**
12 **then the TC1507 grain, the harvest from the**
13 **farmer's fields, would go into the commodity**
14 **system where it would be mixed with every other**
15 **variety being grown in that, wherever that grain**
16 **was going, to that elevator.**

17 And so it would be -- TC1507 event does
18 not look any different from any other corn grain.
19 And so the POA would have to do -- would have to
20 be extremely motivated and do a lot of work to
21 identify TC1507 seed in the commodity system.

22 Q. Dr. Silverstone, that explanation that
23 you just provided, you also didn't share that in
24 your declaration; is that correct?

1 MR. STEENBURG: Objection to form.

2 A. I did not describe that in detail in my
3 declaration.

4 Q. You didn't describe it at all, did you?

5 MR. STEENBURG: Objection to form.

6 A. In paragraph 143 I describe how -- in a
7 very high level, how a POSA could obtain TC1507
8 corn seeds from the commodity system.

9 Q. And at the time when you filed, signed
10 your declaration, in fact, you -- your opinion is
11 that you could have obtained commercially
12 available bulk corn following the 2003, 2004,
13 2005 growing seasons, correct?

14 A. That is correct.

15 Q. When farmers plant crops that have the
16 TC1507 event in them, is there any signage or any
17 indication that that is an event that's at play
18 in the field?

19 A. Some farmers label their fields -- some
20 farmers put signage up to indicate what varieties
21 are growing, but I can't tell you what percentage
22 of farmers that do that.

23 Q. I would like you to turn to paragraph 146
24 in your declaration, please.

1 **A. I see 146.**

2 Q. Okay. In paragraph 146 you say, "I have
3 been informed that for the purposes of
4 anticipation, the question is whether a POSA
5 could obtain the necessary information if they
6 wanted to."

7 Do you see that?

8 **A. Yes.**

9 Q. And that's the standard that you applied
10 in forming your opinions that the Barbour
11 publication was enabled?

12 **A. Yes. I used that to -- as part of my**
13 **analysis.**

14 Q. And the Barbour publication, we can take
15 a look at it, you have it in front of you, that
16 published in February of 2006, correct?

17 **A. That is correct.**

18 Q. Did anything change between the growing
19 season in 2003 and February 2006 that supports
20 your conclusion that Barbour was enabled?

21 **A. One thing that changed would be the --**
22 **restate that. You are looking at what I wrote.**
23 **They could obtain the necessary -- it is talking**
24 **about information here. I was referring to, in**

1 **Barbour, a POSA, it would have been the first**
2 **time a POSA saw the molecular information about**
3 **event TC1507, as well as tools that they could**
4 **use to identify TC1507 events.**

5 Q. Okay. So you are relying solely on the
6 fact that the Barbour application was published
7 for the ability to practice the invention; is
8 that correct?

9 MR. STEENBURG: Objection to form.

10 A. **That is one piece of it because before --**
11 **that -- because it published in February 2006.**

12 Q. Okay. And the information that published
13 in February 2006 is the same information that the
14 patent owner filed in 2004; is that correct?

15 A. **Yes. That was filed by the patent owner**
16 **in 2004.**

17 Q. So that information was put forward to
18 the patent office as of April 2004, as you
19 understand it; is that right?

20 A. **Yes. It was put forth to the patent**
21 **office in 2004.**

22 Q. What else, besides the publication of
23 that information, forms the basis for your
24 analysis that a POSA could have practiced the

1 invention, quote, if they wanted to?

2 **A. The other piece is because there had been**
3 **more of the TC1507 corn planted. It doesn't**
4 **guarantee that a POSA would find it in the**
5 **commodity stream, but it increases the ability to**
6 **be able to find it.**

7 Q. So it wouldn't have been impossible to
8 find it either in 2003 or just before
9 February 2006, correct?

10 **A. Before publication of Barbour?**

11 Q. That's right.

12 **A. No. It wouldn't have been impossible but**
13 **it would have been very difficult.**

14 Q. Let me ask a clearer question because I
15 think there was a lot of pronouns in there.

16 A person of ordinary skill in the art who
17 was motivated in 2003 and just, let's say, in the
18 early 2006 before publication to find TC1507 corn
19 in the commodity channels could have done it?

20 MR. STEENBURG: Objection to form.

21 **A. They -- they could have if they -- they**
22 **had the ability to identify it, to identify**
23 **TC1507 event.**

24 Q. So if I'm understanding correctly, and

1 please correct me if I'm wrong, the factual
2 change siting here today that you are
3 acknowledging between late 2003 and early 2006 is
4 potentially wider availability of the TC1507
5 event in commodity channels; is that correct?

6 **A. That is one piece. The other is that the**
7 **tools available before would not guarantee it's**
8 **the TC1507 event.**

9 Q. And those tools that you are referring to
10 are the DNA tools we discussed are present in the
11 April 2004 filing, correct?

12 **A. No. I'm talking about the antibody tools**
13 **that would have been available in 2003.**

14 Q. Right. So I'm confused. Would those or
15 would those not have been available to evaluate a
16 TC1507 event?

17 **A. They would --**

18 MR. STEENBURG: Objection to
19 form.

20 **A. They would be available to evaluate, but**
21 **they only indicate the Cry1F protein.**

22 Q. Okay. Understood.

23 But you did testify earlier today that
24 the DNA tools that were part of the April 2004

1 application would allow you to have certainty
2 that you had the TC1507 event, correct?

3 **A. That is correct. And that is what would**
4 **be available to the POSA after 2006 publication.**

5 Q. Okay. Did you look at any sales data in
6 2006 for how much TC1507 was planted -- or sold,
7 excuse me, sold?

8 **A. For the 2006 planting season?**

9 Q. Correct.

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

11 Q. Okay. Did you look at any sales data for
12 any year regarding the sale of the TC1507 event?

13 **A. No, I did not look at any sales data.**

14 Q. Okay. Did you look at any data that
15 would provide you how much acreage of TC1507-
16 containing corn was planted in any year?

17 **A. No, I did not look at any planting**
18 **acreage of TC1507.**

19 Q. Okay. And you said this before, but just
20 to really clarify. You personally have not been
21 involved with any sales or commercializing of the
22 TC1507 event at any time, correct?

23 **A. That is correct. I've never worked with**
24 **the TC1507 event.**

1 Q. When's the first time you heard of the
2 TC1507 event?

3 A. I don't remember. But the name, the --
4 **Herculex and TC1507 was commonly discussed in the**
5 **early 2000s, but I can't give you an exact date.**
6 **It was a while ago.**

7 Q. Okay. So in your time at Syngenta, you
8 were aware of the TC1507 event before this case;
9 is that right?

10 A. Yes, I was aware of the Herculex -- the
11 **TC1507 event.**

12 Q. Still on your declaration at
13 paragraph 147.

14 A. Yes.

15 Q. You've indicated that you were informed
16 of a certain legal standard for the purposes of
17 section 112(a), correct?

18 A. Yes.

19 Q. And part of that is the question "whether
20 the necessary materials for practicing the
21 claimed invention were readily available to the
22 public." Do you see that?

23 A. Yes, I see that.

24 Q. And that's the standard that you apply

1 when we were talking about the Wands factors
2 earlier; is that right?

3 MR. STEENBURG: Objection. Form.
4 You can answer.

5 **A. Yeah. I -- we've talked about the**
6 **availability of TC1507.**

7 Q. Okay. What in your mind does the term
8 "readily available" mean?

9 **A. To me, readily available to the public**
10 **means that I, as a private person, could go order**
11 **something or acquire something without much work.**

12 Q. Could a member of the public purchase
13 seeds from a company like Corteva?

14 **A. My understanding -- once again, I haven't**
15 **worked for Corteva or its parent company. But my**
16 **understanding is that to purchase seeds of**
17 **Event TC1507, you have to sign a technology use**
18 **agreement.**

19 Q. And in your mind, how does that affect
20 whether something is readily available or not?

21 **A. It means there are restrictions on the**
22 **use of the material.**

23 Q. So you could get the material, right?

24 **A. Yes.**

1 Q. There would just be restrictions on it,
2 correct?

3 A. But, yes, you couldn't use it for
4 whatever purpose you wanted.

5 Q. How does this idea of readily available
6 as you applied it for enablement purposes
7 under 112 differ from the standard you applied in
8 paragraph 146, which is if -- you could obtain
9 the necessary information, quote, if you wanted
10 to?

11 MR. STEENBURG: Objection. Form.

12 A. The difference is, for example, for as
13 normal an event as DNA is deposited with an
14 organization like the ATCC, a person could fill
15 out the forms and pay a fee and acquire that
16 without much work.

17 And the difference for 146 is it's not a
18 simple process of just filling out an order form
19 that a POSA could acquire materials, as I
20 describe a few paragraphs later. So "if they
21 wanted to," meaning they had to be highly
22 motivated.

23 And what I wrote also is more theoretical
24 because I don't know of anyone who's taken that

1 **approach.**

2 Q. What do you mean you don't know of
3 anybody who's taken that approach?

4 A. Well, usually an event is available
5 through a deposit like the ATCC, so they don't
6 need to screen commodity system grain to find the
7 event.

8 Q. Okay. So sitting here today, you don't
9 know whether anybody has screened the commodity
10 system grain for the TC1507 event?

11 A. For the purpose of isolating and growing
12 the plants.

13 Q. Okay. Are you aware of anybody who has
14 screened the commodity system grain for TC1507
15 for a purpose other than isolating and growing of
16 plants?

17 A. I know that grain going into the
18 commodity system for export and other uses is
19 routinely screened for the presence of approved
20 and unapproved transgenic events. So I would
21 assume that TC1507, having been approved, was one
22 of those approved events that was routinely
23 screened.

24 Q. Okay. And because of these regulatory

1 requirements, it's not unusual for commodity corn
2 to be screened for the presence of a traded
3 issue, correct?

4 MR. STEENBURG: Objection to form.

5 **A. It is often screened, yes.**

6 MS. SOMMERS: We've been going over
7 another hour again. Do you want a break?

8 THE WITNESS: Sure. We can take a
9 break.

10 (Recess taken)

11 Q. Dr. Silverstone, right before the break
12 you mentioned something called "ATCC." Do you
13 remember that?

14 **A. Yes.**

15 Q. What is that?

16 **A. I forgot what the abbreviation stands**
17 **for, but it is a -- I don't know what the**
18 **incorporation is, as an institute or what, but**
19 **they serve as a depository for a number of**
20 **different biological samples.**

21 Q. Okay. What is the purpose of a
22 biological sample depository?

23 **A. With respect to in general or --**

24 Q. In gen- -- I'm just looking for your

1 understanding. Like what is your understanding
2 of the purpose of a biological sample depository?

3 **A. My understanding is it's for being able**
4 **to deposit samples, biological samples, so that**
5 **they are then accessible by members of the**
6 **public.**

7 Q. For the purposes of this proceeding, have
8 you made any effort to access biological
9 materials from a seed depository?

10 **A. For this proceeding, I have not made any**
11 **effort to access samples.**

12 Q. Outside of this proceeding, have you ever
13 personally accessed biological materials from a
14 seed depository?

15 **A. Outside of this proceeding, I have**
16 **accessed samples from a seed depository.**

17 Q. And did any of those samples that you
18 accessed possess the TC1507 event?

19 **A. No, none of those samples had the**
20 **TC1507 event.**

21 Q. When you accessed the samples from a seed
22 depository outside of this proceeding, were there
23 any restrictions placed by the seed depository on
24 those samples?

1 **A. I'm going back over 20 years ago, so I**
2 **don't think so. But that was a long time ago, so**
3 **I don't want to -- I also don't want to misspeak.**
4 **But from my recollection, there were not**
5 **restrictions.**

6 Q. Was the only time that you accessed
7 samples from a seed depository about 20 years
8 ago?

9 **A. Yes. It was from more than 20 years ago.**

10 Q. You haven't accessed any samples from a
11 seed depository in the last five years?

12 **A. No, I have not accessed any samples.**

13 Q. So you don't know, sitting here today,
14 whether there's any restrictions on seed samples
15 from a seed depository in the last five years; is
16 that correct?

17 MR. STEENBURG: Objection. Form.

18 **A. That is correct.**

19 Q. Did you consider any agreements from, for
20 example, the ATCC regarding the use of biological
21 samples that one obtains from that depository?

22 **A. I did not take into account any**
23 **restrictions on samples that ATC provides.**

24 Q. In forming your opinions in this case?

1 **A. In forming my opinions.**

2 Q. Okay. Have you considered any agreements
3 from the ATCC regarding restrictions?

4 **A. Could you restate the question, please?**

5 Q. Have you considered any agreements from
6 the ATCC that identify any restrictions on the
7 biological materials that ATCC provides?

8 MR. STEENBURG: Objection. Form.

9 **A. Any biological materials ATCC provides,**
10 **or are you talking about transgenic plant**
11 **materials that ATCC provides?**

12 Q. Let's just start agnostic to what you're
13 getting. Have you ever looked at any agreements
14 from ATCC that identify any restrictions on
15 biological materials?

16 **A. No, I've not looked at any agreements**
17 **from ATCC.**

18 Q. I'll hand you what's previously been
19 marked as Exhibit 1018.

20 Is that a document that you considered in
21 forming your opinions in this case?

22 **A. Yes, this is a document that I used.**

23 Q. Okay. And what was the purpose of
24 relying on this document in providing your

1 opinions in this case?

2 A. Do you have a citation in my declaration
3 that I could point to?

4 Q. One example would be paragraph 81.

5 A. Okay. I see paragraph 81. Could you
6 repeat your question, please?

7 Q. What was the purpose of relying on this
8 document in providing your opinions in this case?

9 A. My understanding is that when people or
10 companies file these type of event patents, as
11 part of the teaching of what is described, that
12 there's a requirement for a deposit of genetic
13 material, including seeds with a seed depository
14 agency or institute.

15 And I am citing this to show, in support
16 of that analysis, that the patent owner on this
17 patent indeed filed -- submitted seed as part of
18 the filing of this patent.

19 Q. If we turn to claim 1 of Exhibit 1018.

20 A. Do you have a --

21 Q. It's almost the very end of the document.

22 A. Okay.

23 Q. Second, third -- yeah. Okay.

24 A. So 51?

1 Q. Yeah. Column 51, claim 1. Do you see
2 that?

3 A. I see that.

4 Q. It says, "A cotton seed comprising in its
5 genome the [sic] Cry1F cotton event 281-24-236
6 and Cry1Ac cotton event 3006-210-23 and having
7 representative seed deposited with the [sic]
8 American Type Culture Collection (ATCC) with
9 Accession No. PTA-6233."

10 Did I read that correctly?

11 A. Yes, I see that.

12 Q. That reference to ATCC there, that's --
13 that's your understanding of what we've been
14 referring to as ATCC?

15 A. Yes. That is the ATCC that I referred
16 to.

17 Q. Okay. And it's your understanding that
18 if a member of the public wanted to access a seed
19 that has these -- these Cry1F event and Cry1Ac
20 events in cotton, they could go to the ATCC and
21 get it, is that right?

22 A. That is my understanding.

23 Q. Okay. If somebody were to do that and
24 there is an effective patent in place, would they

1 have been able to do whatever they want with that
2 seed?

3 MR. STEENBURG: Objection. Form.
4 Foundation.

5 A. They would -- if the seed has a patent on
6 it, they risk -- they certainly need to abide by
7 the laws that govern our patent system.

8 Q. What do you mean by that?

9 A. For example, as long as the patent is in
10 force, they would not be able to sell this
11 product.

12 Q. Would they be able to make the product
13 that is the subject of the patent if they got
14 seeds from it and there is a patent in force?

15 MR. STEENBURG: Objection to form.
16 Foundation.

17 A. I am not a lawyer, so I don't want to say
18 all the things they can and can't do, because I
19 know some things but certainly not --

20 Q. In your -- in your experience having
21 worked at a large agrochemical company, what is
22 your understanding as to whether you would be
23 able to make and use a claimed invention from a
24 seed depository if there was a patent in force?

1 MR. STEENBURG: Objection to form.
2 Foundation.

3 A. If there's a patent in force, my
4 understanding is that they would not be able to
5 use it for any type of commercial product. But I
6 don't know what other limitations there would be.

7 Q. I'd like to turn to paragraph 40 in your
8 declaration, please. Are you there?

9 A. Yes. I see paragraph 40.

10 Q. The first sentence says "I have been
11 instructed by counsel to assume the relevant
12 timeframe for my analysis in this declaration to
13 be 2003 to 2007."

14 Do you see that?

15 A. I see that.

16 Q. What is your understanding as to why that
17 time period was selected for your focus?

18 MR. STEENBURG: Objection to form.
19 Foundation.

20 A. Turn to a question in my declaration. It
21 has a flowchart that will help me answer the
22 question. Could you restate the question,
23 please?

24 Q. What is your understanding as to why the

1 time period of 2003 to 2007 was selected for
2 analysis in this declaration?

3 **A. That period initiated with the filing of**
4 **a patent application in 2003 followed by the**
5 **patent application that we were talking about**
6 **earlier in 2004 and finally with the application**
7 **that resulted in the '378 patent that was filed**
8 **in 2007.**

9 Q. I think you are looking at page 32 of
10 your declaration to answer that question; is that
11 right?

12 **A. Yes.**

13 Q. You mentioned that there was a patent
14 application filed in May of 2003, right?

15 **A. Yes.**

16 Q. That's the 6,046,772 application?

17 **A. Yes.**

18 Q. You didn't consider whether that
19 application was enabled for the purposes of
20 providing your opinion in this case, did you?

21 **A. I did not.**

22 Q. Did you consider whether the TC1507 event
23 was readily available in 2014?

24 **A. In 2014, no. I -- as I wrote, I limited**

1 **my analysis to the years 2003 through 2007.**

2 Q. As far as you're aware, since TC1507
3 entered the market, has it ever not been
4 available to farmers?

5 MR. STEENBURG: Objection to form.
6 Foundation.

7 **A. I have not analyzed the sales figure of**
8 **the TC1507 event over the extended time period**
9 **you are asking about.**

10 Q. Okay. Have you -- have you analyzed the
11 sales figures for the TC1507 event for any time
12 period?

13 **A. I only refer to the qualitative sales**
14 **that I referenced.**

15 Q. Okay. Do you -- do you know personally
16 whether the TC1507 event has been continuously
17 commercially available since its first use in
18 2003?

19 **A. No. I don't know if it's -- has been**
20 **continuously available from 2003 to the present.**

21 Q. Maybe keep your thumb or finger on page
22 32, and I would like to turn to paragraph 116 in
23 your declaration.

24 **A. I'm at paragraph 116.**

1 Q. Okay. So in your declaration it's your
2 opinion that the Barbour publication in
3 February 2006 is enabled, correct?

4 **A. The Barbour publication enables**
5 **anticipation of the claims --**

6 Q. Okay.

7 **A. -- as I wrote.**

8 Q. Okay. What do you mean as "enables
9 anticipation"?

10 **A. The Barbour claims that were published in**
11 **2006 enable a POSA to carry out the claims in the**
12 **publication.**

13 Q. In paragraph 116 of your declaration you
14 say, "I understand in order for the challenged
15 claims to be entitled to an effective filing date
16 even of July 6, 2007, the application filed on
17 that date would need to practice the challenged
18 claims without undue experimentation."

19 Do you see that?

20 **A. I see that.**

21 Q. And you didn't actually consider that
22 issue, correct?

23 **A. That is correct.**

24 Q. July -- July 6, 2007, is after Barbour's

1 publication date of February 6, 2006, correct?

2 **A. That is correct.**

3 Q. And in your opinion there was enough
4 information before February 2006, combined with
5 the Barbour publication, to enable its subject
6 matter; is that right?

7 MR. STEENBURG: Objection to form.

8 **A. So with the -- any previous information a**
9 **POSA might have and the Barbour publication, it**
10 **allows a POSA to carry out the work described in**
11 **the Barbour publication.**

12 Q. Okay. And you understand that the
13 Barbour publication is the same disclosure as the
14 application that was filed in July 6, 2007?

15 **A. Can you repeat the question?**

16 Q. Sure. I guess maybe I will ask it this
17 way.

18 What is your understanding of the
19 relationship between the subject matter in the
20 Barbour publication and the application that was
21 filed on July 6, 2007?

22 **A. My understanding is that information from**
23 **the Barbour publication was used in the filing of**
24 **the July 2007 -- July 2007 application that**

1 **resulted in the '378 patent.**

2 Q. It is the same disclosure that was in the
3 April 2004 application, right?

4 **A. Yes.**

5 Q. So although you didn't consider it, a
6 person of ordinary skill in the art at July 6,
7 2007, could have practiced the claimed invention
8 of the TC1507 patent, correct?

9 MR. STEENBURG: Objection to form.

10 **A. So the person of skill in the art in 2007**
11 **using the Barbour publication and their knowledge**
12 **would have -- information they need to practice**
13 **the claims.**

14 Q. When you say "practice the claims," do
15 you mean that a person of ordinary skill in the
16 art would have been able to plant and grow a
17 TC1507 corn plant?

18 **A. Based on the Barbour publication, they**
19 **would be able to identify the seed of a TC1507**
20 **plant and then grow the plant.**

21 Q. I'd like you to turn to page 70,
22 paragraph 159 of your declaration. You're
23 talking about Claims 3 to 4 and 7 of the patent
24 at issue, correct?

1 **A. Yes.**

2 Q. So similarly, once you have that TC1507
3 germplasm plant in hand, you've stated that a
4 POSA could likewise have used that TC1507
5 germplasm to breed additional insect corn plants
6 as recited in Claims 3, 4 and 7, correct?

7 **A. That is correct. I stated that.**

8 Q. Okay. And that a person of ordinary
9 skill in the art could have done that as of the
10 date of Barbour's publication; is that right?

11 **A. Yes. As I wrote, as of Barbour's**
12 **publication they could have -- they would first**
13 **have to identify germ plant -- the TC1507 event**
14 **and then continue on, as I wrote. Use that to**
15 **breed additional plants.**

16 Q. And they would have still been able to
17 breed additional insect corn resistant plants as
18 recited in Claims 3, 4 and 7 as of the July 6,
19 2007, filing date as well, right?

20 **A. That's right.**

21 Q. We talked about this distinction between
22 corn containing the TC1507 event in commodity
23 streams then corn that the farmers buy, correct?

24 **A. Yes.**

1 Q. Okay. For the purposes of your opinion
2 that the Barbour publication is enabled, are you
3 relying on both of those TC1507 containing corn?

4 **A. Could you repeat the question? There is**
5 **a lot to that.**

6 Q. There was a lot to that. We have
7 commodity corn and we have corn that the farmers
8 buy and plant, correct?

9 **A. That's correct.**

10 Q. Okay. For the purposes of your opinion
11 regarding the fact that Barbour as a publication
12 is enabled, which of those two types of corn did
13 you rely upon?

14 **A. I relied on the corn available from the**
15 **commodity stream.**

16 Q. And why did you not rely on TC1507-
17 containing corn that the farmers would have had
18 access to?

19 **A. Because the corn that the -- the seed**
20 **corn that the farmers have access to is not**
21 **freely available to the public because it is**
22 **restricted by the technology use agreement that**
23 **it is sold under. So they would not be able to**
24 **do what I describe in paragraph 159.**

1 Q. So I'd like to turn to paragraph 128 of
2 your declaration.

3 A. Okay. I see it.

4 Q. I am on the second page of that
5 paragraph. The very last sentence of that
6 paragraph you say, "In the context of plants in
7 particular, I have been informed that the sale of
8 a reproducible plant variety may enable an
9 otherwise non-enabled printed publication
10 disclosing that plant, that is, so long as the
11 plant is commercially available."

12 Do you see that?

13 A. I see that.

14 Q. Okay. So it's not your position that the
15 plant need only be commercially available, with
16 or without restrictions, to enable a printed
17 publication?

18 MR. STEENBURG: Objection. Form.

19 A. Could you restate the question?

20 Q. Um-hmm.

21 A. Thank you.

22 Q. You've stated here that it could
23 potentially be enabled "so long as the plant is
24 commercially available."

1 **A. Yes, I see I've written that.**

2 Q. That general statement would include corn
3 sold to the farmers, correct?

4 **A. Yes, that would include corn sold to the**
5 **farmers.**

6 Q. Okay. So did you or did you not include
7 corn sold to the farmers as part of your analysis
8 of whether the Barbour publication was enabled?

9 **A. Because I was analyzing whether the corn**
10 **would be publically available, I focused on the**
11 **corn available through the commodity system and**
12 **not sold to farmers.**

13 Q. Look at paragraph 26 of your declaration,
14 please.

15 **A. I see paragraph 26.**

16 Q. Okay. The last sentence in that
17 paragraph on that page, page 9, it says you
18 understand that the two standards for enablement
19 under 102 and 112 are not identical, correct?

20 **A. That is correct.**

21 Q. And then if we look at the section that
22 you reference in that paragraph, at
23 paragraphs 146 and 147, please.

24 **A. Okay. I see paragraphs 146 and 147.**

1 Q. In 146, you've indicated, "I have been
2 informed that for the [sic] purposes of
3 anticipation, the question is whether a POSA
4 could obtain the necessary information if they
5 wanted to."

6 Do you see that?

7 **A. I see that.**

8 Q. Okay. And that's the standard that you
9 applied for determining whether the Barbour
10 publication was enabled for 102, correct?

11 **A. Yes, I used that for whether Barbour is**
12 **enabled for anticipation.**

13 Q. Okay. And then in 147, you describe the
14 standard that you applied for the purposes of
15 section 112; is that right?

16 **A. Yes.**

17 Q. Besides the understanding that you
18 provided in 146 or 147, do you have any -- do you
19 have any understanding of any other differences
20 between the standards for 102 and 112 for
21 enablement?

22 MR. STEENBURG: Objection to form.

23 **A. Right now, no.**

24 Q. Okay. Are these the only -- only

1 differences in standards that were told to you in
2 preparing your declaration in this case?

3 **A. I know we focused on these, but I don't**
4 **want to say we didn't look at others, but I don't**
5 **remember.**

6 Q. Sitting here today, are you personally
7 aware of any other differences between the
8 standards for enablement between section 102 and
9 112?

10 **A. No, I'm not.**

11 Q. You're not a patent attorney, right?

12 **A. I am not a patent attorney --**

13 Q. Okay.

14 **A. -- or any attorney.**

15 Q. Taking a look at the "Materials
16 Considered" list in your declaration at the end,
17 are there any materials that you considered in
18 forming your opinions in this case that are not
19 included on this list?

20 **A. No. This includes all the materials that**
21 **I considered and used in writing my declaration.**

22 Q. As part of your time working on this
23 proceeding, did you review or look at any
24 documents that are not on this list?

1 **A. No. This contains all the documents that**
2 **I used in preparing my declaration.**

3 Q. Okay. Are you aware of any
4 information -- sitting here today, are you aware
5 of any information that is inconsistent with
6 positions you've taken in your declaration?

7 **A. Are you talking about information in**
8 **Appendix A or just information --**

9 Q. Information generally. So sitting here
10 today, are you aware of any information that is
11 inconsistent with positions that you've taken in
12 your declaration that has not been included in
13 this list?

14 **A. No, I'm not aware of any information that**
15 **is inconsistent with my declaration.**

16 Q. In your declaration at paragraph 2, you
17 indicate that you "have no financial income --
18 interest in the outcome of this matter or ... the
19 pending litigation between Petitioner and Patent
20 Owner."

21 **A. That is correct.**

22 Q. Okay. What pending litigation are you
23 referring to?

24 **A. I know that there is a lawsuit going on**

1 **between petitioner and patent owner, but I don't**
2 **know any of the details of the lawsuit.**

3 Q. You said you "have no financial interest
4 in the outcome of this matter or ... the pending
5 litigation," correct?

6 **A. That is correct.**

7 Q. Do you have any financial interest in
8 Inari otherwise?

9 **A. No, I have no financial interest in**
10 **Inari.**

11 Q. Are you aware of whether Inari has been
12 able to access corn seeds containing TC1507?

13 **A. I know that the lawsuit is over Inari's**
14 **access to corn seeds that contain TC1507, but I**
15 **don't know any of the details of the lawsuit.**

16 Q. Okay. Putting the lawsuit aside, do you
17 know whether Inari has been able to access corn
18 seeds with TC1507?

19 **A. It is my understanding that Inari has**
20 **accessed corn seed with TC1507.**

21 MS. SOMMERS: Okay. I'd like to take
22 a short break, if that's okay.

23 THE WITNESS: Or do we -- should we
24 take a lunch break?

1 MS. SOMMERS: Okay. Let's go off the
2 record.

3 (Recess taken)

4 BY MS. SOMMERS:

5 Q. I'd like you to turn to page 56 of your
6 declaration.

7 A. Okay.

8 Q. This is the section at the bottom of
9 page 56 where you provided your opinion that
10 "Barbour Enables Claims 1-2 and 8 For the [sic]
11 Purposes of the Anticipation Analysis," correct?

12 A. Yes, I see that.

13 Q. And you've provided your opinion
14 regarding that topic from page 56 to 65; is that
15 right?

16 A. Yes.

17 Q. For the purposes of conducting your
18 analysis that Barbour, the publication,
19 Exhibit 1009 is enabled, am I correct that you
20 did not consider the Wands factors?

21 A. That's corr- -- I used the Wands for
22 analysis of the '378 patent.

23 Q. Okay. So just for the clarity of the
24 record, for the purposes of your analysis that

1 Barbour is enabled, you did not consider the
2 Wands factors?

3 MR. STEENBURG: Objection to form.

4 A. That's right, I did not use the Wands
5 factors.

6 Q. Do you have something else to say?

7 A. No. Sorry.

8 Q. Okay.

9 MS. SOMMERS: Dr. Silverstone, I
10 don't have any further questions for you today.
11 Thank you for your time.

12 THE WITNESS: Thank you.

13 MR. STEENBURG: No questions.

14 (Whereupon the deposition was concluded
15 at 12:17 p.m.)
16
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24

1 C E R T I F I C A T E

2 I, ARON SILVERTONE, PhD, do hereby certify
3 that I have read the foregoing transcript of my
4 testimony, and further certify that said
5 transcript is a true and accurate record of said
6 testimony (with the exception of the following
7 corrections listed below):

8 Page Line Correction

9

10

11

12

13

14

15

16

17 ARON SILVERSTONE, PhD

18 Sworn to and subscribed before me this

19 day of , 2025.

20

21

22 Notary Public
My commission expires:

23

24

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1 COMMONWEALTH OF MASSACHUSETTS)

2)

3 SUFFOLK, SS.)

I, Katherine A. Tevnan, Registered Merit Reporter, Certified Shorthand Reporter No. 129093 and Notary Public in and for the Commonwealth of Massachusetts, do hereby certify that ARON SILVERSTONE, PhD, the witness whose deposition is hereinbefore set forth, was duly sworn by me and that such deposition is a true record of the testimony given by the witness.

12 I further certify that I am neither related
13 to or employed by any of the parties or counsel to
14 this action, nor am I financially interested in
15 the outcome of this action.

16 In witness whereof, I have hereunto set my
17 hand and seal this 11th day of March, 2025.

18

19 Katherine A. Ternan

20 Katherine A. Tevnan,
21 Registered Merit Reporter
22 CSR # 129093

23 Notary Public

24 My commission expires March 10, 2028

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