

Transcript Micro Wave: Why Some Fruits Ripen Faster In A Paper Bag

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MADDIE SOFIA, HOST:

Hey, nerds. So today, we've got a special guest, SHORT WAVE's very own producer, Brit Hanson. Hey, Brit.

BRIT HANSON, BYLINE: Hello. Hello.

SOFIA: This is your first on-air SHORT WAVE appearance, and I am aggressively excited about this.

HANSON: Oh, I know you are. Yes, it is.

(LAUGHTER)

SOFIA: You're going to do great. You're going to do great.

HANSON: (Laughter). And today, we've got our latest Micro Wave installment, you know, these snappy episodes with a couple of quick science tidbits, some listener mail, which I very much enjoy reading every morning, except for when it's mean.

SOFIA: Yes. Right. I picture you with your cup of coffee and cats just going through the listener mail.

HANSON: Exactly.

SOFIA: So you've put your investigative reporting skills to work on from what I can tell is your favorite topic of all time, peaches.

HANSON: Yeah, I really, really love peaches.

SOFIA: Yeah.

HANSON: I don't know if you know this, but I actually eat one standing over my kitchen sink pretty much every day.

SOFIA: Yeah, I do know that. You've told me that multiple times, Brit, actually.

HANSON: I can't stop talking about it.

(LAUGHTER)

HANSON: They're the best part of summer. But, you know, now that summer's over, I've been using that paper bag trick to get them ripe. Do you know what I'm

talking about? You put the unripened peaches in a paper bag for a couple of days. Take them out, voila, they're ripe.

SOFIA: Oh, yeah. I'm doing that trick all the time. I'm doing that trick right now, actually.

HANSON: You are not.

SOFIA: I have peaches from the farmer's market in a bag. Trust me.

HANSON: OK, well, that's actually what we're going to talk about today. I've been using this trick for years, but I had no idea why it works, so I wanted to find out.

SOFIA: So today in the show, we talk to a fruit expert about why some fruits, like peaches, ripen faster in a paper bag and why others don't. I'm Maddie Sofia. And this is SHORT WAVE from NPR.

OK, Brit, we are talking about why some fruit, like peaches, ripen faster in a paper bag. So who did you talk to?

HANSON: Yeah, so I called Juan Carlos Melgar. He's a professor and pomologist at Clemson University.

JUAN CARLOS MELGAR: Some people wonder - it's like, what's pomology? Pomology is the science that studies fruit trees.

HANSON: Yeah. So, Maddie, full disclosure, I didn't know what a pomologist was before I talked to Juan Carlos, somebody who studies fruit trees.

SOFIA: No shame.

HANSON: Another thing I didn't know is just how many varieties of peaches there are. Maddie, take a guess. How many do you think there are?

SOFIA: Eleven.

HANSON: OK, well, 11 is a great number.

(LAUGHTER)

SOFIA: I can tell it's not right. I can tell it's not right.

HANSON: But it is not the right number. Juan Carlos told me that he works with almost 300 different varieties.

SOFIA: No. There's no way. Three hundred?

HANSON: And he says compare that to apples, for instance.

MELGAR: A lot of people know names of varieties of apples, the Gala, Red Delicious or whatever. However, nobody knows varieties of peaches. And that's because their window - their harvesting window is so short. It takes, like, 10 days or two weeks - that variety is gone.

SOFIA: Wow, you are already blowing my mind, Brit Hanson. OK.

HANSON: Peach facts. Peach facts.

SOFIA: All right. I feel like I've been disrespecting peaches up until this point, and I need to change. But OK. So what did you find out about the paper bag trick?

HANSON: Yeah, so Juan Carlos says that there are two key factors to understanding why some fruit, including peaches, ripen faster in a paper bag. So let's start with factor number one.

MELGAR: Peaches produce a gaseous hormone. It's called ethylene.

HANSON: So that gaseous hormone ethylene is a ripening hormone. So as peaches ripen, they produce a burst of ethylene.

SOFIA: So ethylene and ripening go hand in hand.

HANSON: Exactly. But it's not just that a ripening peach produces ethylene. It also responds to it. So say, for example, you create an environment where a peach is not only producing ethylene, but it's also surrounded by it. That right there is the trick to making the peach ripen faster, finding a way to surround a peach in the gassy hormone.

(LAUGHTER)

HANSON: Gassy hormone.

SOFIA: I'm sorry. I just didn't expect gassy hormone to be the end of that sentence.

HANSON: I know (laughter).

SOFIA: OK, OK. This is where the paper bag comes in, right?

HANSON: Yeah. So you put a peach in a paper bag, close it up. And then all of the ethylene it's naturally producing gets captured and starts to accumulate inside the bag, which means the peach is surrounded by ethylene.

SOFIA: Like a little peach steam room...

HANSON: (Laughter).

SOFIA: ...You know, like a virtuous ripening cycle.

HANSON: Exactly. (Laughter) That's exactly what it's like. OK, so there's another part of this that I thought was pretty cool, too.

MELGAR: A ripened peach that is producing a lot of ethanyl could help ripen a peach that is not ripened yet or another type of fruit, like the same - banana. Banana is kind of, like, a classic example.

HANSON: Yeah. So, basically, the more ethylene accumulating in the bag, the faster the fruit ripens. So a super ripe peach is going to help a really hard peach ripen even faster, if that makes sense. Personally, I like to call this fruit teamwork.

SOFIA: (Laughter).

HANSON: I actually think that - Maddie, I think that that's the scientific term.

SOFIA: So, OK, Brit, does it matter whether or not you use a paper bag? Or could you just put the peach in, like, some other kind of container?

HANSON: I actually wondered about this, too. So basically, is there something special about the paper bag? And this brings us to factor number two, respiration.

MELGAR: The other characteristics of these fruits is that they have not only a peak in ethylene, they also have a peak in respiration. They are respiring. They are producing CO₂.

SOFIA: Yeah, fresh fruit, you know, continue to respire or breathe, if you will, after being harvested. So consuming oxygen, producing carbon dioxide - those peaches need that oxygen, Hanson.

HANSON: Exactly.

MELGAR: If that CO₂ accumulates in there and there is less oxygen, then they're going to respire less. And it's going to slow down their...

HANSON: Got it.

MELGAR: ...Ripening. If you want it to ripen, you need to let that CO₂ go out.

HANSON: OK, so something that allows, like, a bit of airflow...

MELGAR: Yes. Yes.

HANSON: ...Or oxygen to be coming in and out.

MELGAR: Transpirable, uh-huh.

HANSON: So a plastic bag won't work. Neither will a Tupperware container or anything else that essentially prevents oxygen from getting inside.

SOFIA: So does the paper bag trick work for other fruits, too, Brit?

HANSON: So it works for some - but not all - peaches, bananas, tomatoes - basically fruits that ripen off the plant after they've been picked. Those are the ones that you can pop into a paper bag.

SOFIA: Got it. Wow. Brit Hanson, I have learned so much today.

HANSON: Maddie, look. I did science.

SOFIA: (Laughter). You really did, bud. You really did it.

(LAUGHTER)

SOFIA: OK, are you ready to close out with some listener mail?

HANSON: Yeah, let's do it. Actually, I want to start. OK, so I've got a very special email from a listener that I think you personally are really going to like. It comes from Kate (ph).

SOFIA: OK.

HANSON: (Reading) Hi. I don't remember the exact context, but I was chatting with people and somehow the topic of what celebrity we most want to meet...

SOFIA: Oh, no.

HANSON: ...Came up.

SOFIA: I hope it's Whoopi Goldberg.

HANSON: And I froze.

SOFIA: I hope it's Whoopi Goldberg.

HANSON: I literally could not think of anyone except Maddie Sofia.

SOFIA: (Laughter). I just started sweating. In the middle of that, I got really uncomfortable and started sweating.

HANSON: Listen, Maddie. You're a celebrity now.

SOFIA: OK. All right.

HANSON: No pressure.

SOFIA: Kate, I appreciate you. Brit Hanson, we're moving on. All right. OK.

HANSON: (Laughter). OK, why don't you take the next one?

SOFIA: OK, so I really enjoy when our listeners write in with episode ideas, which is what one listener, Anna (ph), did a couple of weeks ago. She writes, (reading) hi, SHORT WAVE people. Here is a nonordered list - thank you for being specific - (reading) of science topics close to my heart. One, naked mole rats.

Love it, honestly.

HANSON: Yes (laughter).

SOFIA: (Reading) Two, predatory bacteria. Love that.

HANSON: Obviously.

SOFIA: Any bacteria - always.

(Reading) Three, various animals that save sperm for a later date.

HANSON: Ooh.

SOFIA: Various, Anna? Various? You have - OK. All right.

HANSON: She knows something I don't know.

(LAUGHTER)

SOFIA: (Reading) Four, anything with dinosaurs, volcanoes, asteroids, permafrost, Antarctica, electric eels, regular eels - got to give love to them regular eels, those OG eels - (reading) or jellyfish.

HANSON: Wow (laughter). Maddie, we have a lot of work to do.

(LAUGHTER)

SOFIA: OK. Big thanks to Kate and Anna for listening and writing in. Aren't our listeners just the best, Brit?

HANSON: Def.

SOFIA: You know who else is the best? You, Brit.

HANSON: OK.

SOFIA: Thank you for bringing us this peach science.

HANSON: Listen. I have never loved science as much as when I was exploring peaches.

SOFIA: (Laughter). All right, folks. Happy weekend. Stay safe, and we will see you next week.

HANSON: This episode was produced by Brent Baughman, fact checked by Ariela Zebede (ph) and edited by Viet Le.

SOFIA: Thanks for listening to SHORT WAVE from NPR.

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