

Record of the chat from the May 17, 2023 Webinar: Open-Source Fruit and Vegetable Cooling Chamber

A recording of the webinar and the slides from the presentation can be found here:

<https://www.cooling-chamber.mit.edu/webinar>

- 01:18:40 mahavir's iPad: Hellow every one
- 01:20:04 stephen: hi guys
- 01:20:21 Heewon Lee: Reacted to "Hellow every one" with 👍
- 01:20:23 Heewon Lee: Reacted to "hi guys" with 👍
- 01:20:39 Solar Freeze-Dysmus: Reacted to "hi guys" with 👍
- 01:28:07 Dorothee Merkl (EnDev Rwanda): Thanks for the presentation! Interesting point on the rain, how do you deal with heavy rain storms? Would you stop the system to avoid water from entering?
- 01:30:33 Pat Hughes: Why did you choose to push air only and no pull side?
- 01:31:41 Heewon Lee: If you have any questions at any time please type them in the chat window and we will read them to the group during the Q&A session
- 01:32:20 Pat Hughes: Did you conduct any market studies to determine whether or not the market will bear the cost of a cold system that doesn't take product temps ALL the way down to optimal temps?
- 01:32:43 Theresa Wittkamp: Did you have problems with molds or fungi on Fresh produce? if yes, how did you solve it?
- 01:33:11 Kukom Edoh Ognakossan: What is the typical range of Relative humidity in the chamber?
- 01:34:03 Jennifer M Hoody: Can/are the chambers used for pre-cooling or are they best just for cold storage?
- 01:34:57 Pat Hughes: Can you define what you used as a benchmark to determine the word Spoilage?
- 01:36:15 Amanda Brondy: I missed first 15 minutes. How can we access recording?
- 01:37:30 Heewon Lee: Replying to "I missed first 15 mi..."
The webinar is being recorded and will be available for you to watch it again!
- 01:38:06 Heewon Lee: Replying to "Did you have problem..."

Thanks for the question! I will record it and read it out to the group during Q&A!

01:38:12 Heewon Lee: Replying to "What is the typical ..."

Thanks for the question! I will record it and read it out to the group during Q&A!

01:38:14 Ahmed: The system use dry air, how does it work in humid climate regions?

01:38:17 Heewon Lee: Replying to "Can/are the chambers..."

Thanks for the question! I will record it and read it out to the group during Q&A!

01:40:18 Theresa Wittkamp: How much water does the system use per day?

01:40:30 Nancy Adams: <https://www.cooling-chamber.mit.edu/>

01:43:33 Heewon Lee: Replying to "The system use dry a..."

Thanks for the question! I will record it and read it out to the group during Q&A!

01:44:08 Theresa Wittkamp: Did you measure Quality Parameters of specific vegetables/fruits to assess the shelflife? which ones using which tools?

01:44:18 Heewon Lee: Replying to "How much water does ..."

Roughly 100 liters per day. And it depends on the air flow

01:50:01 Ivo: Replying to "How much water does ..."

What is the requirement for water quality - I am thinking of the use regions where water is a rare resource.

01:53:57 Jennifer M Hoody: How long is produce typically kept in the chamber?

Additionally, are you aware of whether any cooling is done before and/or after produce is stored in the chamber?

01:54:41 Kajal Gulati: Have any cost effectiveness analysis been done for this in any context?

01:58:04 Jennifer M Hoody: Thank you! And yes, looking forward to visiting and learning more!

01:58:15 Heewon Lee: Reacted to "Thank you! And yes, ..." with 

01:58:39 Leo: Long question (happy to talk to this & clarify)

What does your experience say about the sectors near total focus on the use of high power condenser based cold rooms, even for applications largely working to remove field heat?

I am asking to see the overall potential role you see across the spectrum of needs in these 'pre-cooling' cold chain applications. What value you see in greater signposting / information on these issues for the donors & others heavily investing in piloting off/weak grid cold storage solutions?

01:58:53 Jorge Siesquen Deza: Reacted to "Thank you! And yes, ..." with 👍

02:02:48 Julio Noriega: Can the system be used to freeze fruit pulp at -18 degrees Celsius?

02:03:20 stephen: Replying to "Thank you! And yes, ..."
You are welcome

02:07:19 Kukom Edoh Ognakossan: overall quality assessment of the stored produce - using the 1–9 rating scale developed by Kader and Cantwell (2005) where 1 = extremely poor quality (not usable), 3 = poor quality (serious deterioration, limit of usability), 5 = fair quality (deterioration evident, but not serious, limit of saleability), 7 = very good quality (minor symptoms of deterioration, not objectionable) and 9 = excellent quality (essentially no symptoms of deterioration)

02:08:01 Theresa Wittkamp: Thank you :)

02:08:31 Heewon Lee: Reacted to "overall quality asse..." with 👍

02:08:43 Heewon Lee: Replying to "Long question (happy..."
Thanks for the question! I will record it and read it out to the group during Q&A!

02:08:47 Heewon Lee: Replying to "Can the system be us..."
Thanks for the question! I will record it and read it out to the group during Q&A!

02:09:00 Heewon Lee: Replying to "Have any cost effect..."
Thanks for the question! I will record it and read it out to the group during Q&A!

02:09:07 Heewon Lee: Reacted to "Thank you :)" with 👍

02:15:48 Leo: Thanks to the team! Happy to talk further after this webinar due to time.

02:16:12 Heewon Lee: Reacted to "Thanks to the team! ..." with 👍

02:18:27 Kajal Gulati: Other than Kenya and India, has this technology been tested anywhere else?

02:19:23 Leo: I would be happy to expand on my point if we have a few minutes now & share some examples from World Bank and Efficiency for Access experience. These point best to the issue of greater specification on cold storage solutions.

02:21:25 Jorge Siesquen Deza: Hi Eric, greetings from Claudia and I (Pukhi Peru)! Great to hear what you have been working so far! We were wondering if you have heard about this term 'low-tech' cause this is what evaporative cooling is. Besides, have you ever heard about Low-tech Lab? There is a big movement around low technologies.

02:21:28 Priya: Thanks Eric and team, folks in Kenya and India.

02:22:15 Heewon Lee: Reacted to "I would be happy to ..." with 👍

02:30:22 Solar Freeze-Dysmus: Amazing working on this project with Eric and the team in Kenya. Looking forward to scaling this innovation with Solar Freeze going forward.

02:30:47 Heewon Lee: Reacted to "Amazing working on t..." with 👍

02:35:18 Nancy Adams: Where will recording and slides be available?

02:36:05 Nancy Adams: <https://www.cooling-chamber.mit.edu/>

02:36:28 Jennifer M Hoody: Thank you all very much! Excited to continue to learn more!

02:36:44 Jorge Siesquen Deza: Thanks everyone!

02:36:45 Kukom Edoh Ognakossan: Well done!

02:36:46 Heewon Lee: Reacted to "Thank you all very m..." with 👍

02:36:48 Kukom Edoh Ognakossan: Thank you

02:36:49 Heewon Lee: Reacted to "Well done!" with 👍

02:36:55 stephen: thank you guys

02:36:56 Heewon Lee: Reacted to "Thanks everyone!" with 👍

02:37:00 Heewon Lee: Reacted to "Thank you" with 👍

02:37:03 Heewon Lee: Reacted to "thank you guys" with 👍