



## PEF President’s Message



The year of 2020 has given us many new postharvest learning opportunities, with news of virtual conferences, workshops, e-courses and more. In October the board of directors made an announcement of a new grant opportunity for PEF e-learning graduates. The Cooperative Ventures Grant is for conducting joint postharvest training in cooperation with local NGOs, charities, or clientele groups. (See page 8 for application form). In November, we received news of the plans for a 3rd All-Africa Postharvest Congress and Expo, set for September 2021. I am very pleased to get this news, and I have agreed to serve on the organizing and technical committees.

We wish everyone a successful 2020 and we are looking forward to the upcoming events in 2021.

## ‘World Food Day’ and ‘International Day of Awareness of Food Loss and Waste’



In response to the call from UNFAO, the world has been celebrating October 16 as ‘World Food Day’ and from this year September 29 will be observed as ‘International Day of Awareness of Food Loss and Waste’. On these days, interesting programs were organised by different organisations to promote awareness and action to reduce food losses and wastes and ensure healthy diets for all.



## Ceres2030: Uniting Science and Policy to End Hunger Sustainably

# Ceres2030

## Sustainable Solutions to End Hunger



INTERNATIONAL  
FOOD POLICY  
RESEARCH  
INSTITUTE



**IISD**  
International Institute for  
Sustainable Development

Ceres2030 is a joint project between Cornell University, the International Institute Food Policy Research Institute (IFPRI), and the International Institute for Sustainable Development (IISD), with funding provided by the Gates Foundation.

Almost 80 researchers spanning 23 countries worked intensely for three years to identify the most promising solutions to building sustainable food systems and to tell donors how much it would cost to end hunger by 2030. **Dr Lisa Kitinoja and Dr Deirdre Holcroft** from The Postharvest Education Foundation (PEF) were among them. The efforts these researchers, which combined artificial intelligence, state-of-the-art modelling, and a strong partnership with Nature Research, was released at the launch event for Ceres2030: Sustainable Solutions to End Hunger. The launch event organised on October 13, 2020 focussed on how much public spending is needed in low- and middle-income countries, including donor contributions through official development assistance (ODA), to achieve the UN Sustainable Development Goal 2, zero hunger. Panellists explored a diverse mix of agricultural interventions in three broad areas—farm-level interventions to directly improve farm productivity, drivers in market systems that can facilitate storage and services that farmers need, and social interventions to empower rural populations. [[Recording link](#)]

The findings of the project were published in the form of

- I. [Nature Research collection – Sustainable solutions to end hunger](#)
- II. [‘Ceres 2030: Sustainable Solutions to End Hunger - Summary Report’](#)
- III. [Ending Hunger, Increasing Incomes, and Protecting the Climate: What would it cost donors - Report](#)
- IV. [Ending Hunger by 2030 : Policy Actions and Costs – A Policy Brief](#)

The postharvest interventions database of 334 studies published in the Nature Sustainability journal:

Stathers, T., Holcroft, D., Kitinoja, L. et al. (2020) A scoping review of interventions for crop postharvest loss reduction in sub-Saharan Africa and South Asia. Nature Sustainability. 3, 821–835. <https://doi.org/10.1038/s41893-020-00622-1>





## Emergence of the All Africa Postharvest Congress and Exhibition

The recent publication Ambuko, J.L.; Hutchinson, M.J. and Bissi, K.P. (2020). Emergence of the All Africa Postharvest Congress and Exhibition: Creating Awareness about Food Loss & Waste and Sustainable Solutions presented in detail the journey of the All-African Postharvest Congress and Expo (AAPHCE). It also gave insights on outcomes of earlier AAPHCE events held in Kenya (2017) and Ethiopia (2019).

During 2019, in Ethiopia the convening of the AAPHCE was officially handed over to the Africa Union Commission (AUC). The AUC has announced 3<sup>rd</sup> AAPHCE for September 2021.



## Ani Widiastuti - Community engagement activity on 'Indirect Solar Dryer'



Ani Widiastuti (4<sup>th</sup> from right) with women farmer group and indirect solar dryer

**Ani Widiastuti** (2016 PEF graduate) and her team at Universitas Gadjah Mada, Jakarta, Indonesia conducted a community engagement activity with a women's farmer group in Yogyakarta, Indonesia to introduce the solar dryer to dry moringa leaves and some other herbs for making herbal tea. She mentions that the solar dryer is very useful to small-scale farmers of Indonesia for value-addition of foods, especially during the dry season. It is easy to construct, doesn't require electricity and all products are quickly dried and kept clean.

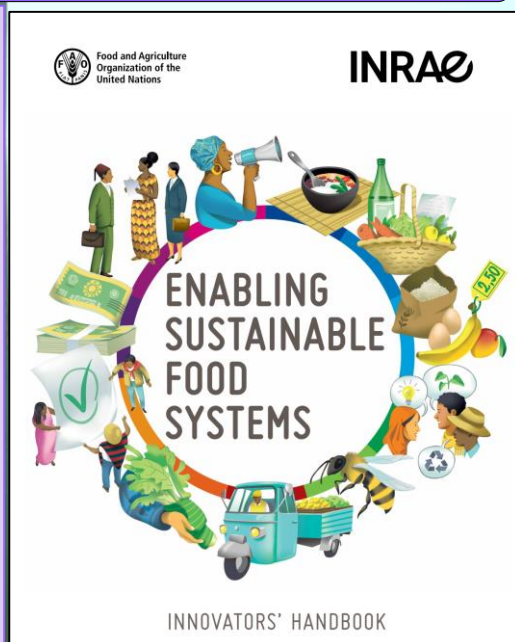
The details of the model of indirect solar drying, which utilises an empty warming chamber connected to tall racked unit topped with a vent, were explained as Tool number 47 in the book 100 Under \$100: Tools for Reducing Postharvest Losses. The e-copy the book can downloaded for free at [www.postharvest.org](http://www.postharvest.org).





## Enabling sustainable food systems

FAO and INRAE recently published an innovators' handbook – **Enabling Sustainable Food Systems**. The handbook is mainly relevant to 'sustainable food systems innovators' and was written by a group of innovators from Asia, Africa, the Americas and Europe, who are leading initiatives to grow, share, sell and consume more sustainable foods in their local contexts. It includes experiences that are changing the organizational structures of local food systems to make them more sustainable. The topics included in this handbook are arranged into four categories of innovations: engaging consumers, producing sustainably, getting products to market and getting organized.



## Africa Food Safety & Quality Summit



**AFRICA'S FOOD SAFETY & LABORATORY MANAGEMENT CONFERENCE & EXPO**  
MARCH 8-12, 2021

The Africa Food Safety & Quality Summit is a platform to discuss the future of regulating and managing food safety in Africa – while improving the adoption of the latest ideas and technologies that reduce risks and improve compliance and quality of food and agricultural produce throughout the supply chain. The summit will be in Hybrid format (Live in Nairobi, Kenya and Virtually around the Africa and the World).

**Registration link:** <https://www.foodsafetyafrica.net/>

## The Earthshot Prize - 10 prizes of 1 million British pounds

Prince William announced the **EarthShot Prize**, 10 prizes of 1 million British pounds each year for the next 10 years. Dr Lisa recommends to propose a project for "turning plastic waste into reusable plastic crates for reducing food losses". Plastic crates are proved to reduce postharvest losses for perishable crops from 30-40% to <5%. Who is interested in joining us?

"The Earth is at a tipping point and we face a stark choice: either we continue as we are and irreparably damage our planet, or we remember our unique power as human beings and our continual ability to lead, innovate and problem-solve. People can achieve great things. The next ten years present us with one of our greatest tests – a decade of action to repair the Earth."

Prince William





## Global Cooling Prize

### CHAMPIONS 12.3

#### SDG TARGET 12.3 ON FOOD LOSS AND WASTE: 2020 PROGRESS REPORT


An annual update on behalf of Champions 12.3




Champions 12.3 organized a special online event on September 24 - "Success or Crisis in 2030? The Fight to Halve Food Loss and Waste" and discussed the progress the world has made toward the 50% reduction target and quoted the shining examples of hope as well as issued a call to action from the coalitions.


An annual report was published presenting the information to decision-makers in government, business, academia and civil society about the recent advances and remaining steps needed to address in order to achieve the target by 2030. [[Download Report](#)]

## Innovate for Impact – Siemens Design Challenge






Hadijah Nantambi - Social entrepreneur of EcoLife Foods, M.S. in Technology innovations and industrial development  
(representing the EcoLife Team in Uganda)



Ian Williams - Practicing engineer, PhD in structural materials  
USA



Kyle Gaiser - Practicing engineer, M.S. in mechanical engineering  
USA



### Innovate for Impact

Siemens Design Challenge

### Awards Ceremony

September 15, 2020

Hadijah Nantambi (2016 PEF Graduate) from Uganda and her team at EcoLife were finalists in the Engineering for Change "Siemens Design Challenge". Their design 'EcoLife Cold Room' provides off-grid farmers with cold storage for fresh produce. It prioritizes cooperative design, affordability, sustainability, and technological innovation to benefit rural produce farmers in central and southern Uganda and contributes to sustainable development goals of zero hunger and reducing food losses. The cold store is made up of locally available materials making it affordable and easy to maintain. [[Design details](#)]

## Business Development for Food Safety (BD4FS) Project

Postharvest/Food Safety desk study for FES and the USAID funded Business Development for Food Safety (BD4FS) Project. Several of our PEF e-learning grads are working with FES on a desk study on the topic of food safety, postharvest loss and SME development, led by Dr Md. Razu Ahmed (Bangladesh, 2015 PEF Graduate). The four countries that are the focus of the study are Ethiopia, Rwanda, Senegal and Nepal. Vijay Yadav and Lisa Kitinoja are serving as technical advisors.





## 2nd Tanzania Post Harvest Management Platform Conference

The 2nd Tanzania Post Harvest Management Platform Conference was organised at Sokoine University of Agriculture, Morogoro on 18-19 September 2020. **Ms Bertha Mjawa** (PEF Board Director) participated in panel discussion on topic 'PHM, Food security and Industrialization'. **Dr Ramadhani Majubwa** (2012 PEF Graduate) also presented his work in the conference.

Bertha Mjawa (2<sup>nd</sup> from right) in the panel discussion



## Tracking progress on food and agriculture-related SDG indicators



FAO has launched the second edition of its report “Tracking progress on food and agriculture-related SDG indicators”. According to the data contained in the FAO report, collected before the COVID-19 pandemic, progress remains insufficient in the food and agriculture domain, suggesting that the world is not on track to meet the relevant targets by 2030. The report offers a detailed analysis on the SDG indicators under FAO custodianship, which include SDG 2 (zero hunger), SDG 5 (gender equality), SDG 6 (clean water and sanitation), SDG 12 (responsible consumption and production), SDG 14 (life below water) and SDG 15 (life on land).

**[\[Read full report\]](#)**

## EcoPlastic – Plastic recycling to produce PICS bags

EcoPlastic is a plastic recycling company in Rwanda and produces new plastic products. EcoPlastic produces a number of different products for use in various sectors, including agriculture, construction and industrial production.



In collaboration with Purdue University the EcoPlastic is also manufacturing PICS bags, a popular hermetic grain storage bags. The bags provide simple, low-cost method to reduce incidence of postharvest insect pests and thus losses in crops. **[\[Website\]](#)**



## Zero Loss Centres – Kenya

Impact of Zero Loss Centers on Kenyan Mango Farmers



To address the issues of postharvest losses in mango fruit during peak production period, 'Zero Loss Centers' were established in Kenyan mango growing regions. These centres were part of the YieldWise initiative and The Rockefeller Foundation, the University of Nairobi and Technoserve Kenya partnered to design them. These centres are owned and run by farmer groups and equipped with low-cost

cold storage technologies (such as the Coolbot Cold Room, Charcoal Cooler and Zero Energy Brick Cooler) with capacity of 10 -12 MT. These storage units can extend the storage life of mango fruit for up to one month. The centres are also equipped with juice processing and drying facilities for value-addition. [\[Blog post link\]](#)

## Actions to Transform Food Systems Under Climate Change

CGIAR Research Program in Climate Change, Agriculture and Food Security (CCAFS), through extensive research, research analysis and stakeholder consultation, have identified high priority actions that are essential for climate change adaptation and mitigation in food systems. These actions are all grouped in to four major areas. And one of the four action areas is to reduce emissions by significant dietary shifts and massive reductions in food loss and waste.

[\[Read complete report\]](#)



Actions to  
**Transform Food Systems**  
Under Climate Change



## Some publications on the use of plastic crates

Babarinsa FA, Ogundele RB, Babarinsa OA, Omodara M A (2018). Evaluation of plastic crate as replacement for raffia basket to prevent in-transit damage of packaged tomatoes. *Journal of Postharvest Technology* 6(3):70-79. [\[Download\]](#)

Tua, C., Biganzoli, L., Grosso, M., & Rigamonti, L. (2019). Life cycle assessment of reusable plastic crates (RPCs). *Resources*, 8(2), 110. [\[Download\]](#)

Benson, O. B., I. A. Ambee, A. N. Osegbo and E.U. Okonkwo (2020). Re-useable plastic crates as a veritable tool for handling of fresh fruits and vegetables: Lagos State as a case study. *Journal of Stored Products and Postharvest Research* 11(1): 1-7. [\[Download\]](#)





# The Postharvest Education Foundation

Website: [www.postharvest.org](http://www.postharvest.org) E-mail: [postharvest@postharvest.org](mailto:postharvest@postharvest.org)

## Announcement –PEF Cooperative Ventures Grant (1000 US\$)

To encourage local collaborative efforts in postharvest education (training, outreach, community projects), the “Cooperative Ventures” grant will provide a cash award of US\$ 1000 for a PEF e-learning graduate who demonstrates the need for funding to develop a new program or improve an existing training program in which they will work cooperatively with a local organization in their country. [[Download Application](#)].

The grant is sponsored by 'Cooperative Ventures', a small business in the USA, owned and operated by Dr Lisa Kitinoja since 1993.

<https://www.etsy.com/shop/CooperativeVentures>

## Amazon Smile – The Postharvest Education Foundation

You can support the activities of ‘The Postharvest Education Foundation’ while you are doing your shopping for upcoming holiday season, through AmazonSmile donations. Shop at [smile.amazon.com/ch/45-1240017](https://smile.amazon.com/ch/45-1240017) and Amazon donates 0.5% of the price, at no cost to you.

## PEF’s ‘Global Postharvest E-learning Program’ is Free to all!

Check the website for further details and register by completing Assignment #1:

[http://postharvest.org/postharvest\\_elearning\\_program1.aspx](http://postharvest.org/postharvest_elearning_program1.aspx)

## Postharvest Queries:

Mail us at [postharvest@postharvest.org](mailto:postharvest@postharvest.org) any postharvest related questions you wish to be answered.

## SUPPORT OUR WORK

The Postharvest Education Foundation is a 501(c)(3) non-profit public charity with aim to reduce global food losses, which are as high as up to 50%.

Donations to The Postharvest Education Foundation are used for 3 major program activities:

1. Postharvest tool kit: For e-learners from developing country who complete their training (US\$400 each).
2. Postharvest Closing Workshops for e-learning graduates (Estimated as \$1200 per e-learner).
3. Travel Support: To pay for the travel expenses to attend international postharvest training programs (air tickets, hotels, food, local transport costs) (Estimated as \$1500-\$2000 per e-learner).

Kindly check our website (<http://www.postharvest.org/donate.aspx>) for other alternate ways to donate.

Thanks in advance for your tax-deductible donation, which will be used to train young horticultural professionals via low cost internet based programs, with reading assignments, fieldwork on improved practices for postharvest handling, storage, processing and marketing.

Email us at [newsletter@postharvest.org](mailto:newsletter@postharvest.org) to subscribe to the PEF newsletter.

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