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# FRESH World Vegetable Center NEWSLETTER

Healthier lives, more resilient livelihoods through greater diversity in what we grow and eat

## Kicking off our Golden Jubilee Year



### *Sowing seeds, meeting needs*



World Vegetable Center

1973-2023

With this first issue of Fresh!, we are celebrating the launching of our Golden Jubilee Year.

Founded in 1971 and with operations starting in 1973 as the Asian Vegetable Research and Development Center (AVRDC) with a focus on tropical Asia, today the work of the World Vegetable Center (WorldVeg) spans the globe. Headquartered in Taiwan, with regional bases in Benin, Mali, Tanzania, India and Thailand, the Center has about 350 staff dedicated to the mission of realizing the potential of vegetables for healthier lives and more resilient livelihoods.

This year we will celebrate half a century of achievements, and we will look ahead at the future of vegetables. Our mission is now more relevant than ever. This Golden Jubilee year will allow us to reflect on how to further our efforts to seeing **healthier lives and more resilient livelihoods through a greater diversity in what we grow and eat.**

This will be preceded by a Vegetable Science Day on 26 October and a number of other events.

Our anniversary logo symbolizes our happy mood and the diversity and colorfulness of the world of vegetables! The slogan “sowing seeds, meeting needs” encapsulates our approach and impact at many levels. Seed is our core ‘business’. We are proud to be the custodians of the largest publicly available collection of vegetable seed in the world and proud of our breeding programs that have resulted in many varieties of a great number of crops making a difference in farmers’ fields. Whilst we work with farmers who sow and grow, we also sow the seeds of knowledge working in partnership around the world. Knowledge about how to grow the seeds safely, how to arrive at better yields and quality products in the field and throughout the year, how to reduce post-harvest losses and add value through processing, and how to reduce the environmental footprint of the vegetable sector. More and more we are also placing our work in a food systems context, with adequate attention to demand and policy considerations.

In ‘meeting needs’, we refer to the needs of people for safe and healthier diets, for more resilient livelihoods of youth, women, farmers and all those who work along vegetable value chains, and for healthier soils, more resilient farming systems, and for a healthier environment in general. We have had tremendous impact with our varieties, production and post-harvest technologies working in partnership and strengthening capacities, in particular in Africa and Asia.

This first edition of Fresh! may look a little different, but contains the usual quarterly updates of our work over the last few months, and looks ahead at activities and events to come. We are also working on a new website that will allow you to more clearly visualize all our activities and impacts, and improve the ease of finding any of our ‘knowledge products’ – training videos, toolkits, extension leaflets, scientific papers and more. This will evolve as the year progresses, to better meet your needs. Please get in touch with us if you want to make any requests or suggestions.

We hope you enjoy reading this selection of some of our work.

I am very proud of all that we continue to achieve, with my heartfelt thanks to the sterling efforts of all WorldVeg staff, and the continued support from our many partners and funders.

Best wishes

*Marco Wopereis*  
Director general

## From Africa



### Children's meals are getting greener in Eswatini

At least 10,000 children now have improved nutrition from eating traditional vegetables, thanks to the TAVI project implemented with the Eswatini Ministry of Agriculture. And many are also learning how to grow traditional African vegetables in special school gardens, now in their second growing season...



### Encouraging young people to embrace agriculture through the 4k club program in Kenya

The program aims to encourage young children to embrace agriculture by equipping them with necessary skills to venture into the field. The clubs provide enriching opportunities for children to establish and manage agriculture projects at home and school...



### Bringing green leafy vegetables back on the menu in Ouagadougou

We believe in a future with improved lives and livelihoods, and fortunately, this is often the case. But sometimes we also lose something of the past which once benefited us. In Burkina Faso, traditional diets included more healthy green leafy vegetables. Can we bring them back into contemporary diets...?

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### [Teaching tomato grafting in Kenya - reducing disease, improving yields](#)

Bacterial wilt disease causes huge losses in crops worldwide, and is a special problem for tomato producers in Kenya. Amongst a range of techniques to overcome this WorldVeg showed how to graft high yielding varieties onto disease resistant eggplant rootstocks during a training course at the end of November 2022...



### [Promoting forgotten food crops in Madagascar, and more...](#)

At the end of 2022, the Darwin project in Madagascar formally closed after three very successful years. In a country known for its rich biodiversity, people had lost the habit of eating diverse traditional vegetables, and some wild species were at risk of extinction. But WorldVeg made a significant impact...



### [Launch of a new policy and act on agroecology in Murang'a county, Kenya](#)

A ground-breaking policy and act on agroecology were unveiled on 9 March 2023, the first of its kind in Kenya. The new Murang'a County Agroecology Development Policy 2022-2032 and Murang'a County Agroecology Development Act 2022 will encourage sustainable agricultural practices, and support the promotion, development and regulation of the organic food industry in the county....



### [The Africa Vegetable Breeding Consortium and WorldVeg](#)

Established in 2018, the Africa Vegetable Breeding Consortium (AVBC) is a joint initiative of Worldveg and the Africa Seed Trade Association (AFSTA). AVBC helps companies to learn about latest developments in vegetable breeding research. A WorldVeg team from Benin also had a booth at the recent AFSTA Congress in Dakar...

## From Asia

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### [New technologies lead to bumper tomato yields in Assam](#)

Lutfu Begum Laskar is a progressive female farmer from the northeast of India, who has set a shining example in tomato production after adoption a range of technologies she learned from WorldVeg and the Assam Department of Horticulture...



### [Showcasing vegetable research and projects in Thailand](#)

At the Kaset Fair on 3-11 February - Thailand's largest agricultural fair, WorldVeg and the Tropical Vegetable Research Center (TVRC) of Kasetsart University exhibited their work, alongside a celebration of Kasetsart University 80th anniversary...



### [The status of seed and seedling systems in Dhaka and Metro Manila](#)

Two recent studies found that to improve urban farming systems and vegetable production, the supply of quality vegetable seed and seedlings can play a pivotal role. The increasing demand but inadequate supply creates an opportunity for seed and seedling businesses, but the nascent urban industry needs support from both the public and private sectors....



### [Farmer field days on integrated pest management of tomato in the Philippines](#)

The WorldVeg IPM package for tomato production was piloted in farmers' fields in Talavera and San Jose municipalities, Nueva Ecija province on 1-2 March. Field days allowed the sharing information between more than 100 farmers, experts and government officials....

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### [Farmer field days on integrated pest management of lablab bean in India](#)

Two villages in Coimbatore district, Tamil Nadu enjoyed field days on 17 February and 2 March, run by the Centre for Plant Protection Studies and Tamil Nadu Agricultural University, in association with State Department of Horticulture. In all, 326 farmers, 46 horticulture extension staff, 48 BSc agriculture and horticulture students and nine PhD students participated...



### [Imperatives for improvement of food safety in fruit and vegetable value chains in Viet Nam](#)

A recently published report contains a detailed analysis of fresh produce for contaminants, and explores ways to enhance farm management, market infrastructure, and food safety management...

## And to the future...



### [ACIAR and WorldVeg sign new agreement](#)

We are very happy to announce that the Australian Centre for International Agricultural Research (ACIAR) has renewed its research for development partnership with WorldVeg, signing a new 3-year agreement on 3 February 2023...

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### [ICAR-WorldVeg meeting](#)

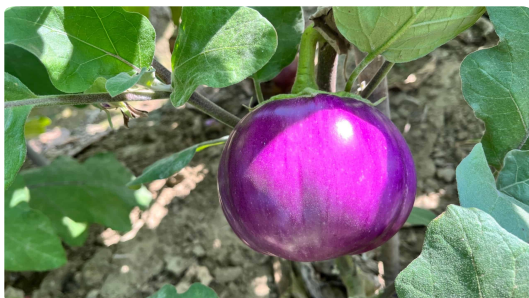
WorldVeg Director General Marco Wopereis met with the Director General of the Indian Council of Agricultural Research (ICAR) and others in Delhi on 10 March, to discuss strengthened collaboration. A draft 5-year workplan will be finalized at the earliest opportunity, involving WorldVeg, the Indian Institute of Pulses Research, the Indian Institute of Vegetable Research, and the Indian Institute of Horticultural Research, amongst others....



### [USDA-ARS delegation visits WorldVeg headquarters](#)

A delegation from the Agricultural Research Service, U.S. Department of Agriculture (USDA-ARS), led by USDA-ARS Administrator Dr Simon Liu, visited WorldVeg headquarters on 8 March 2023 to get acquainted with WorldVeg's work....

## New projects



### [TAsVI - Taiwan – Southeast Asia Vegetable Germplasm Initiative](#)

The TAsVI project aims to strengthen international collaboration to rescue and safeguard vegetable biodiversity in Asia for climate resilient and healthy food systems. The project will repatriate seed of more than 3,000 accessions of unique and lost vegetable varieties collected in the 1990s and 2000s by



### [Better Bitter Gourd](#)

Jointly funded by 35 private seed companies, this program 'Growing new markets with better bitter gourd genetics' will run in Thailand until January 2025. Bitter gourd abounds in phytonutrients and is an important commercial cash crop cultivated by smallholder farmers in Asia.

Philippines, Thailand and Viet Nam.



### **WFP Mali Resilience**

Smallholder farmers and consumers in Mali encounter serious challenges in achieving zero hunger and improved nutrition, and the World Food Programme identifies as the main causes, the limited access to diverse and nutritious food alongside poor agricultural productivity and infrastructure, aggravated by conflict and displacement, and climate change and variability.



### **COA Cambodia – Scaling**

Domestic vegetable production in Cambodia supplies only 38 kg per person per year, far below what is consumed, so the country relies on significant imports from neighboring countries. However, imported vegetables may be of poor quality due to unrefrigerated transport over large distances and contamination with pesticide residues and pathogens. The project aims to make vegetables more available, affordable and accessible by enabling smallholder farmers in Cambodia in increasing year-round production of safe vegetables.

## Upcoming events



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### 9th International Conference - Management of

#### DBM & Other Crucifer Insect Pests

- 2-5 May 2023
- Phnom Penh, Cambodia

[Learn more](#) | [Register now](#)



### APSA-WorldVeg consortium annual workshop

- 9-11 May 2023
- WorldVeg Headquarters, Tainan, Taiwan

[Learn more](#) | [Register now](#)

## Our latest publications

(January - March 2023)

### Highlighted article (published 27 March)

## Forgotten food crops in sub-Saharan Africa for healthy diets in a changing climate

Maarten van Zonneveld, Roeland Kindt, Stepha McMullin, Enoch G. Achigan-Dako, Sognigbé N'Danikou, Wei-hsun Hsieh, Yann-rong Lin, and Ian K. Dawson  
PNAS 120(14): e2205794120. <https://doi.org/10.1073/pnas.2205794120>

*Africa's "forgotten" food crops could support more climate-resilient and healthful food systems in sub-Saharan Africa (SSA), but the promotion of these crops has received limited attention. Projecting forward to the year 2070, we show that a prioritized collection of these crops, differentiated by food groups, has high potential to diversify cropping systems of major staples to support climate-resilience and nutrition in the SSA region. This analysis, contextualized by subregions within SSA as a whole, informs practitioners, researchers, and*

### ***Other journal articles***

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Kim, J.; Rahman, M.-M.; Kim, A.-Y.; Srinivasan, R.; Kwon, M.; Kim, Y. 2023. [Genome, host genome integration, and gene expression in \*Diadegma fenestrata\* ichnovirus from the perspective of coevolutionary hosts.](#) FRONTIERS IN MICROBIOLOGY. 14:1035669.

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Nair, R.M.; Boddepalli, V.N.; Yan, M.-R.; Kumar, V.; Gill, B.; Pan, R.S.; Wang, C.; Hartman, G.L.; Silva e Souza, R.; Somta, P. 2023. [Global status of vegetable soybean.](#) PLANTS, 12(3):609.

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Zaccari, C.; de Vivo, R.; Pawera, L.; Termote, C.; Hunter, D.; Borelli, T.; Kettle, C.J.; Maas, B.; Novotny, I.; Wanger, T.C.; Dulloo, E.; Fadda, C.; Gee, E. 2023. [Lessons learned from the Second International Agrobiodiversity Congress: Adopting agricultural biodiversity as a catalyst for transformative global food systems.](#) CURRENT OPINION IN ENVIRONMENTAL SCIENCE & HEALTH. 31:100411.

### ***Book chapters***

Harris, J.; de Steenhuijsen Piters, B.; McMullin, S.; Bajwa, B.; de Jager, I.; Brouwer, I.D. 2023. [Fruits and vegetables for healthy diets: Priorities for food system research](#)

Switzerland: Springer. p. 87-104.

van Zonneveld, M.; Volk, G.M.; Dulloo, M. E.; Kindt, R.; Mayes, S.; Quintero, M.; Choudhury, D.; Achigan-Dako, E.G.; Guarino, L. 2023. [Safeguarding and using fruit and vegetable biodiversity](#). In: Science and innovations for food systems transformation. / ed. by von Braun, J.; Afsana, K.; Fresco, L.O.; Hassan, M.H.A. Cham, Switzerland: Springer. p. 533-567.

### **Reports**

Alam, M.J.; Kumar, S.S.; Schreinemachers, P. 2023. [A scoping study on the status of seed and seedling systems in Dhaka, Bangladesh](#). Shanhua, Taiwan: World Vegetable Center. 41 p.

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Ayenon, M.A.T.; Aglinglo, L.A.; Sognizoun, D.; Tchokponhoue, D.A.; Azagba, J.; Sognigbé, N.; Schreinemachers, P.; Schafleitner, R. 2023. [Actions stratégiques pour le renforcement du système semencier formel des cultures maraîchères au Bénin](#). Shanhua, Taiwan: World Vegetable Center. 8 p.

Basher, M.A.; Hoi, P.V.; Dinh, T.T.; Srinivasan, R.; Schreinemachers, P. 2023. [Imperatives for improvement of food safety in fruit and vegetable value chains in Viet Nam](#). Metro Manila, Philippines; Asian Development Bank. 45 p.

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## WorldVeg in the news

[News]

### [WorldVeg in the news](#)

[抗病耐熱小番茄新品 種苗亞蔬25號12月上市](#)

The Central News Agency, 10-March-23

[不怕瘋癩！種苗場攜手亞蔬中心培育新品種小番茄 抗病還耐熱](#)

Liberty Time Net (Taiwan), 10-Mar-23

[WorldVeg's Ralph Roothaert on Kenya national television](#)

KTN News (Kenya)

[Murang'a County Government enacts an Agro ecology Policy and Act](#)

Kenya News Agency, 10-Mar-23

[Agro-ecology development policy](#)

Murang'a County Government Blog, 9-Mar-23

[New disease resistant and market-preferred tomato varieties are developed in Benin](#)

SeedQuest (USA), 7-Mar-23

[How ambient temperature affects the heading date of foxtail millet \(\*Setaria italica\*\)](#)

Frontiers (Taiwan), 2-Mar-23

[From seed to sale -2. Varieties of moringa cultivated by around world](#)

Time.News (India), 25-Feb-23

[種子的過去 我們的未來：保種行動全面展開中](#)

Taiwan Environment Information Center, 8-Feb-23

[New partnership agreement signed to improve global nutrition and food security](#)

ACIAR (Australia), 3-Feb-23

[Cladosporium cladosporioides causes leaf blight on garden pea in Telangana, India](#)

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### [Taiwan seeks greater cooperation with Philippines on vegetable production](#)

VN Explorer (Netherlands), 8-Jan-23

### [Taiwan seeks greater cooperation with Philippines on vegetable production](#)

News Explorer (USA), 8-Jan-23

### [The smart trick of all types of spider plants that no one is discussing](#) [martinoltdk.full-design.com](#) (USA), 6-Jan-23

### [Rethinking food markets initiative: stakeholders workshop in Nigeria](#)

IFPRI (Nigeria), 3-Jan-23

[Video]

### [Our Island - seed conservation](#)

Taiwan Public Television Service (PTS), 6-Feb-23

### [Vegetables are here! \(episode 1\) 青菜抵家啦\(上\)](#)

Formosa TV, 4-Feb-23

### [Vegetables are here! \(episode 2\) 青菜抵家啦\(下\)](#)

Formosa TV, 4-Feb-23

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## Quote of the quarter



*"Learn how to treat your vegetables with the love and kindness that they deserve."*

- Antoni Porowski,  
Canadian actor, author, cook, and food and wine expert on the TV series Queer Eye

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## Connect with us



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