



echo news

Hope Against Hunger | volume 46 | issue 1



in this issue: community-level techniques work to meet global goals
• connecting to serve • is TAD I for you • ECHO's first building



Abram J. Bicksler Ph.D., President/CEO

***"And they will spring up among the grass like poplars by streams of water."
Isaiah 44:4***

Dear Friends,

Just as a tree that is planted by waters takes time to develop, reach its full potential and provide shade, food and shelter to so many parts of its environment, so it is with an organization. It starts out as a seed of an idea, is planted and grows, weathers storms, becomes stronger, puts down roots as it climbs upward and outward, and all along, becomes more of a blessing with time as it provides a benefit to all who sit in its shade.

As we move into our 42nd year of ECHO, I am heartened by the solid foundation we have in our dedicated staff and those who pray for, volunteer, and give sacrificially to ECHO so that it, like the tree above, can be a blessing to those all around the world. I am also excited that this year marks the beginning of our strategic planning process to set the goals, activities, and indicators for our next 5 years. I look forward to kicking this off in February and gaining input and insight from many different stakeholders to ensure that we maximize our strengths, fill our gaps, and stay laser-focused on our mission and vision.

Like a tree and an organization, communities also need space and time to develop. Within these pages, you'll read about the amazing work that you are making possible. All around the world we come alongside and equip those with whom we work so that they can build strong roots that enable them to weather the storms of life. It is incredibly important that we equip and empower farmers and community members themselves. It is our joy to pass along the hope and blessing that you give by partnering with us.

Thank you, and be encouraged,

A handwritten signature in black ink, appearing to read 'ah j bl'.

Abram J. Bicksler Ph.D., President/CEO

ECHO exists to follow Jesus by reducing hunger and improving lives worldwide through partnerships that equip people with agricultural resources and skills.



Cover photo: In Thailand, some ethnic minorities live and farm in the mountainous regions, having crossed the border to escape oppression. This woman showed our team her kidney bean harvest during a village visit.

ECHO News is published quarterly by ECHO, Inc.

edited by Danielle Flood

Please share your comments about ECHO News. Write: 17391 Durrance Road, North Fort Myers, Florida, 33917, e-mail: info@echonet.org, or call: 239-543-3246.

in this issue



connecting 3 global goals 5 is TAD 1 for you? 9 fewer inputs 13

ECHO Development Notes #158

At the historical center of our equipping work is ECHO Development Notes (EDN), an electronic publication which we send quarterly to thousands of people in more than 190 countries, in three languages (English, French, and Spanish). In EDN, we share the most practical information about growing food under difficult circumstances.

Also in EDN are "Echoes from Our Network"; "From ECHO's Seed Bank"; and more. Issues #1-51 were compiled in the 1990s into the *Amaranth to Zai Holes* book, which is available online for free. ECHO's

second book, *Agricultural Options for Small Scale Farmers*, expanded on the foundation of *Amaranth to Zai Holes* by covering EDN 52 through 100, with articles from outside contributors.

EDN 158 was just released in January of 2023 and covers topics such as Is Drip Irrigation Right For Me?; Options for Storing Grains; Hermetic Sealing in Haiti; Starfighter Lettuce; and other resources. 🌱

To access EDNs or share them with someone working internationally, please visit: <http://edn.link/edn>



Connecting to Serve

In November, network members in Florida gathered at the ECHO International Agriculture Conference. More than 200 global practitioners united to connect, learn, and grow through the conference.

The hum of conversation pervaded the room, flowed out the doors, and even filled the lobby. Old friends greeted one another and new acquaintances discussed some of the most unique conversation topics imaginable. “The weevils we hatched...” or “My zai holes were too shallow...” leads the casual observer to wonder what type of conference this is.

The event, of course, was ECHO’s International Agriculture Conference, held in November 2022, which brought together more than 200 missionaries, development workers, students, and organizations from around the world.

“Meeting people who are passionate about the same things you are passionate about is simply wonderful,”

While virtual events filled the gaps in 2020 and 2021, the joy of returning together in-person was a highlight for many. “Meeting people who are passionate about the same things you are passionate about is simply wonderful,” shared one attendee. “The diversity of topics covered speaks to a wide range of people involved in the holistic nature of agriculture development work,” mentioned another.

The diversity of attendees and topics covered speak to the heart of ECHO’s equipping work. 62.3% of attendees surveyed reported that they spend at least half of their

time in agricultural development work, but their vocations varied from medical worker or farmer, to researcher, educator, or missionary.

After plenary talks each morning, hands-on opportunities to learn filled each afternoon at the ECHO Global Farm.

Cambodian Bounoeuy Kes shared, "What I learned in this conference is that ECHO has so many people that come from so many countries around the world. Meeting all the brothers and sisters and connecting with them is wonderful. I like the devotion speaker that brought the Word of God. The passage was familiar, but God used the insight to speak to me – It shaped me, made my faith grow, and I look forward to applying it to my life. Also, the information that I learned in this place is amazing. The people's expertise in different areas – they contribute and share their research, making it available to me. I'm excited about all the information I received here. I look forward to connecting with ECHO – getting to more of the practical part of agriculture – I let ECHO screen out agricultural techniques that are not practical so I can use the best of the teaching where I am in Cambodia."

ECHO exists to equip, resource, and connect these workers where they serve so that many more people can experience hope against both physical and spiritual hunger. Summing up our mission, one attendee shared, "My favorite takeaway was that for the Christian, farming is so much more about relationship than just method. Relationship is essential to community life change!" We are grateful for our partners that connect deeply and relationally and for you as a donor who make these impacts possible. 🌱

Opposite: Conference attendees mingle in between sessions. Right, top to bottom: Dan Jansen, Elisama Daniel, Richard Grangard, and Henry Jahonga pause for a photo at the ECHO Global Farm; Dr. Marjatta Eilitta presents a plenary session on Farmer-To-Farmer programs globally; ECHO Trainer Andy Cotarelo shares a breakout session in the Community Garden; Delegates from various backgrounds and working countries gather to discuss oral Bible storytelling.



Community-Level Techniques Work to Meet Global Goals

A recent report from the United Nations highlights progress made toward the 2030 sustainable development goals and calls for accelerated global action to ensure safe drinking-water, sanitation and hygiene for all.

Urgent action is needed globally and locally to achieve safe and sustainably managed water, sanitation and hygiene for all in order to prevent devastating impacts on the health of millions of people.

Findings from World Health Organization and United Nations show that acceleration is needed in many countries to achieve Sustainable Development Goal 6 – clean water and sanitation for all by 2030.

Findings from World Health Organization and United Nations show that acceleration is needed in many countries to achieve Sustainable Development Goal 6 – water and sanitation for all by 2030

The goal seeks to “Ensure [the] availability and sustainable management of water and sanitation for all,” with six outcome targets on the broader water sector including WASH.

SDG goals are broken into targets. Target, 6.a says: By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities



A recent training at the ECHO Asia Small Farm Resource Center facilitates hands-on learning as trainees fit pipes and reservoir together to create the various stages of the multi-stage biochar and biosand water filter.



and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies. Target 6.b states: support and strengthen the participation of local communities in improving water and sanitation management

While 45% of countries are on track to achieve their nationally-defined drinking-water coverage targets, only 25% of countries are on track to achieve their national sanitation targets. Less than a third of countries reported to have sufficient human resources required to carry out key drinking-water, sanitation and hygiene (WASH) functions.

While progress is being made on global fronts, ECHO trainers in East Africa and Thailand are working to help eliminate this problem at the household level by using biosand and biochar water filters.

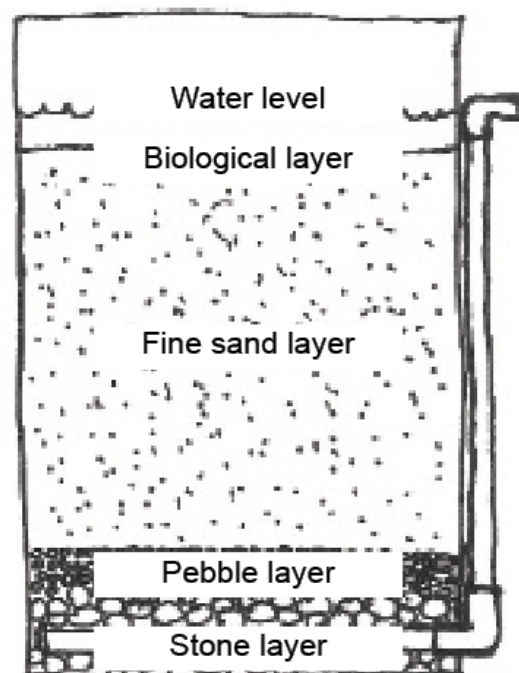
Proven over the years, this technology can effectively provide safe drinking water to the household. It works by filtering impurities through a natural biological layer and then layers of fine sand, coarse sand, and fine gravel. The biosand filter can be made using local materials and is a low-cost system that removes suspended solids and pathogens from water in order to make it safer for human consumption. The result is cleaner water for drinking for

domestic use. This bottom-up approach will complement and help communities work together to achieve national and global goals.

"We are facing an urgent crisis: poor access to safe drinking water, sanitation and hygiene claim millions of lives each year, while the increasing frequency and intensity of climate-related extreme weather events continue to hamper the delivery of safe WASH services," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "We call on governments and development partners to strengthen WASH systems and dramatically increase investment to extend access to safely managed drinking water and sanitation services to all by 2030, beginning with the most vulnerable."

To access a collection of water, sanitation, and hygiene resources, or plans to build the bio-sand filter on ECHOcommunity, visit <http://edn.link/water> 🌐

Above: Biosand water filters made by hand by an ECHO partner in the mountains of Peru. **Right:** An illustration of the biosand water filter shows biological, sand, and pebble layers of this filter. The filtered water is pushed by gravity down into the bottom pipe which releases filtered water into an external container.



what's happening



Making bokashi in the village of Sabi. Fermented bokashi fertilizer is made from dried manure, local soil, chaff from the grain harvest, and indigenous microorganisms.



Improved donkey harnesses increase the comfort for the animal and usefulness for the farmer. Esupat Saitoti, right, tested the new harness last month sharing, "I learned how to use my single donkey and the new bit and collar. This new way of harnessing is better than using ox-yokes."

#echofightshunger



Follow us on Instagram for pictures of ECHO's work all around the world. #echofightshunger

Proud of His Progress



Pastor Elie smiles in his SRI rice plot during a follow up visit. We wrote about Pastor Elie a year ago and he is still implementing and sharing what he learned from ECHO. Now he is growing SRI rice with great results!

g at ECHO



Partners in Egypt

Ahmed and Sofia took what they learned from ECHO Florida and are now connecting with farmers in rural Egypt to teach new ideas about sustainable crop and soil management. Here, Ahmed is walking with a local farmer on a family farm, discussing current crops and productivity.

Biosand Filtration for Fish Harvesting



ECHO staff Chai and Andre built a small scale fish hatchery integrated with a biosand water filtration system to research ammonia and nitrates which are harmful to fish.



Biochar Step-By-Step



Bio-char is a charcoal-like substance created by burning organic material in a smokeless, controlled process. Trainees at a recent one-day event at ECHO Asia made biochar and used it to build a bio-sand water filter as well.

Is TAD I for You?

Missions volunteers of all kinds can benefit from ECHO Florida's course on Tropical Agriculture Development. The next course will be offered March 27-31st.

In-person trainings at ECHO Florida are an exciting way to connect with the needs of our network while investing the knowledge we steward with partners across the globe. ECHO Trainer Stacy Swartz is one of ten trainers who will dive into her expertise to share agricultural techniques, skills, and ideas. Stacy says, "I like to hear the passion our trainees have to serve, to learn how agriculture is a part of

that passion, and then try to help them achieve their learning goals to better serve others."

Introduction to Tropical Ag Development (TAD) will benefit those who are considering short- or long-term involvement in international agricultural development work and/or international project volunteers (e.g., Peace Corps). It can also be helpful to those who have been serving internationally for a few years but who would like to take a step back and re-evaluate their approach. Even part-time volunteers will benefit from this course including short-term mission volunteers and missions committee members of churches involved in projects overseas.

Favorite classes from previous courses include Soils and Soil Life, Basic Botany for Gardening, and Introduction to Community Development, as attendees shared that these courses gave practical and actionable knowledge that will support their work around the world.

If you're a beginner, don't worry, one attendee shared that TAD was a "great beginner course with a good flow, time for questions, and great Biblical connections with faith." 🌱

Trainee Candice works with Farm Manager Andy Cotarelo to prepare a raised bed during the course. Raised beds are an important tool in vegetable and fruit production in the tropics.



“

In Their Own Words: William Mkushi

My name is William Amule Mkushi, and I originate from the Kush mountains of Southern Sudan. I have been completing my studies in Communications and Media at the Habari Maalum Media College in Arusha since 2021. Over the past 6 months I have been an intern at ECHO East Africa where I have been gaining practical experience in environmental restoration through agroforestry, agroecology, and doing several films and photography to support ECHO's work.

I have witnessed how planting more trees can be a way to help address drought in East Africa, as trees can play an important role in improving water availability and mitigating the impacts of drought. Trees can help to increase soil moisture retention and reduce evaporation, which can help to improve water availability for plants and animals. Trees can also intercept rainwater and reduce runoff, helping to conserve water in the soil.

I have witnessed the excitement of smallholder farmers when we have trained them in contour establishment on highly eroded hillsides, followed by distributing multipurpose trees. In November this year, ECHO East Africa distributed about 25,000 trees of eleven



different species to small scale farmers in a 15 kilometer radius of the Impact Center. The program took about three weeks to complete distribution, while geotagging is ongoing. I have been involved in producing videos and photos with the intention of providing the local media with information to create awareness of this effort.

I have witnessed the excitement of smallholder farmers when we have trained them in contour establishment on highly eroded hillsides

It should be noted that best practices in distributing trees are more involved than simply giving trees to small-scale farmers. We trained farmers in adequate digging of holes, mulching to maximize the effect of scant rainfall, recognizing the trees received and their uses, on protecting the trees from livestock through village bylaws and encouraging practices like zero-grazing at least during the first year of establishment.

Tree distributions are not a stand-alone solution to addressing the challenges faced by these communities. They should be implemented as part of a comprehensive strategy that takes into account the specific needs and contexts of the farmers and the community." 🌱

Above: William Mkushi selects croton megalocarpus trees with village extension officer, Benjamin Luambano.

”

More yield with fewer inputs: Experiences from West Africa

Partnerships in West Africa are reaching farmers across Benin, Togo, Guinea, Mali, and Burkina Faso with techniques to lessen chemical inputs while increasing crop yields.

For the past eight months, ECHO West Africa has partnered with Alliance World Fellowship (AWF) and CAMA Services in training more than 500 people in eight different countries to support themselves by using Farming God's Way. Thanks to you, hundreds in Africa have learned how to utilize sustainable farming practices, how to take better care of their environment, and about the relationship they can have with God.

Responding to Food and Fertilizer Shortages

Reuters reports that in mid-2022 nearly 346 million Africans were enduring extreme levels of food insecurity due to import challenges from the war in Ukraine coupled with rising food costs, long-term droughts, armed conflicts, and terrorist attacks. Farmers have been hit especially hard as grains and commercial fertilizers have become increasingly difficult to access.



Through Biblically based agricultural principles, participants would learn how to not only generate profitable results for the current and coming years, but how to also restore and conserve their land while spending less on inputs. The goal was to show each participant how God Himself was the first farmer and that by working in ways that honor Him, we may better steward and harvest that which He has already blessed us with.



"This field that you see is the result of your teaching," shared Mr. Pare Desire. "I have been farming this field for several years, but it has never looked this good. The training I received in making compost and liquid fertilizer, as well as support with seeds, are the secrets of this improvement."

He continued: "I put into practice what I learned and you see the results. My work is done and I look forward to the harvest. Last year, I was able to obtain about 40 kg of grain from this field, but this year I expect to double the harvest."

Later, Mr. Pare reported that his harvest was 200 kg of corn from the 0.25-hectare field! This fourfold improvement came despite an extended drought experienced by the village.

Equipping Others

From April through July, hundreds in countries such as Guinea, Côte d'Ivoire, Liberia, Mali, Togo, Burkina Faso, and more learned the tangible skills needed for making their own compost, fertilizer, and biopesticides. Further lessons were taught on raising poultry, growing moringa, and more. Participants also had the opportunity to learn about the many different aspects of trade such as buying and selling, supply and demand, customers and competitors, as well as selling quality products.

Throughout all of this, an emphasis was placed on doing things on time, with a high standard, without waste, and in step with the Spirit.

Seeing Seeds Sprout

Since the conclusion of these trainings, the three partner organizations have received many encouraging testimonies. At the end of each of the trainings, participants were tasked with sharing what they had learned with three others back home. ECHO has found that on average, nearly 10 additional people per participant have come to learn about these valuable techniques. Isaac, a participant in Guinea, said, "With the acquired training, we plan to improve our techniques to increase crop performance." Jean, another participant in Guinea, said, "May God bless you richly for organizing this training. It is the best practical training I have ever attended."

Help Us Continue the Work

Through your support, work has been done to not only restore the health and livelihoods of African farmers, but to also plant seeds and share holistic restoration in both their communities and environments. Join us to provide trainings in additional countries in throughout 2023. 🌍

Above: Millet grows healthy and tall in a field in Burkina Faso. Opposite: In Benin, farmers learn about the benefits of mulch and other techniques to improve harvests.

ECHO's First Building

A Renewed Mission for the A-Frame

When ECHO began work in Florida, the A-Frame was one of the first buildings constructed. Completed in the 1970s by United Methodist Volunteers, this building was at the heart of ECHO's ministry throughout the 1980s. It has served as ECHO's offices, the Seed Bank, and housing. Many staff, including Dr. Martin and Bonnie Price, interns, and ECHO trainees, have fond memories of calling the A-Frame home during their time at the farm. This amazing structure has proved to be safe, strong, and useful through many years but needs a major overhaul.

The first two floors have been reorganized and redeveloped several times to meet changing needs. In recent years it has been used primarily to house and feed students being trained at the

Global Farm. Centrally located on campus, its kitchen is indispensable, supporting educational events, and providing food services to those learning about providing food worldwide.

Teaching those who come to ECHO about the interconnectedness of growing and eating is vital to ECHO's ministry. If we grow healthy crops in creative and sustainable ways, but the food doesn't make it to the table, it is wasted. Appropriate and well-designed kitchens reduce waste, improve safety, and can increase the adoption of healthy, farm-fresh ingredients.

We are excited for the next era of the A-Frame! The second floor is being remodeled into a style of accommodation not currently available, providing space for larger groups that come to serve and learn. A larger project has begun to replace the over-utilized home kitchen on the second floor with a high-capacity kitchen downstairs. When complete, cooking and cleaning will be safer, more efficient, and more cost-effective. Because of passionate donors like you, the work has begun, and volunteers have completed the demolition and framing!



www.echonet.org/donate-items

To finish the project and to steward your gifts well, we are now seeking the donation of used (but excellent condition) kitchen fixtures, cabinets, and appliances. Gifts of equipment help us to direct funds directly to missional programs. There is a list of needed items that will increase our mission's capacity and efficiency at www.echonet.org/donate-items. Please let us know if you would be interested in meeting any of these tangible needs. 🌱



Can a plant actually improve the soil for the next year's harvest? It probably can if it is a Green Manure/Cover Crop. Green manures are plants used for the primary purpose of improving soil fertility. Cover crops are plants used for the primary purpose of controlling weeds. Here are some benefits of GMCCs that you can use in your own garden, or share with others.

Potential benefits of GMCCs include:

1. Increase soil organic matter through biomass production
2. Increase nutrient cycling
3. Maintain or increase soil life through covering the soil as "living mulch"
4. Increase soil resilience
5. Decrease inputs
6. Reduced labor (while growing)
7. Income generating
 - fodder for animals
 - human food (pulses)

Potential disadvantages include:

1. Slow results: benefits of a first-year GMCC crop are often not seen until the next growing season
2. When planted with other crops, there may be competition between crops
3. Unless GMCC also produces food or income, it is not always readily accepted at first. 🌱

Fund a Charitable Gift Annuity from Your IRA

Did you know that the US Government now authorizes IRA-funded legacy gifts? Now is the time to start thinking about this new opportunity.

IN A NUTSHELL

The new law permits an IRA owner age 70½ or older to make a one-time qualified charitable distribution (QCD) of up to \$50,000 from an IRA to fund a charitable life income gift such as a charitable gift annuity. Annuity payments would be made to you and/or your spouse. You may find that an IRA-funded gift annuity is an attractive new way to achieve your giving goals.

WHO BENEFITS?

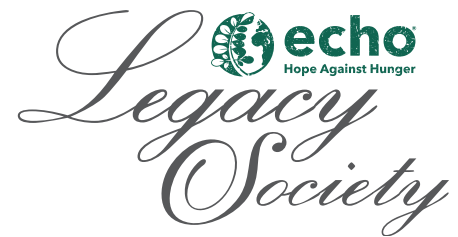
According to the American Council on Gift Annuities (ACGA), the average age for an annuity donor is age 79. A Charitable Gift Annuity (CGA) would give you the security of fixed lifetime payments. If you currently have an annuity, a second annuity would increase your current and future secure income.

You benefit because the IRA distribution made directly to fund a CGA is not included in taxable income. You don't need a large estate to make a big difference in the lives of the families ECHO serves around the world.

To find out how you can advance ECHO's work by making a planned gift through your will or retirement plan, please contact Glenn Hornbuckle at 239.567.3327 or ghornbuckle@echonet.org.

The legacy you'll leave tomorrow starts with the plans you make today. 🌱

*This is not intended to be tax or legal advice. Please connect with your financial advisor





17391 Durrance Road
North Fort Myers, FL 33917
239-543-3246 | www.echo.net.org



Increased Capacity at ECHO Asia

One of the benefits of the ECHO Asia campus has always been the nearby Sala Conference & Retreat Center, a beautiful and functional space for meetings and events. After years of renting the space as needed, ECHO was given the opportunity to purchase the land and buildings.

Officially acquired in 2022, the Sala improves the efficacy and efficiency of ECHO events, adding guestrooms, an industrial kitchen, and meeting space for trainees at the Small Farm Resource Center and Seed Bank. Inaugurating the space, ECHO Asia hosted 36 World Challenge partners from across Asia for a week of hands-on trainings, culminating in a seed swap in late October 2022.

This property poises ECHO Asia to offer more trainings at the Small Farm Resource Center and grow as we prepare to launch the ECHO South Asia Impact Team, serving more than 1 billion farming families across South Asia! 2023 will be exciting for this new team! 🌍

