

# TUESDAY MORNING SESSIONS

9:00	9:30	10:00	10:30	11:00	11:30
Conservation Agriculture: Lessons for food security interventions	Tropical and subtropical fruit crops		Break	Cold chain 101	

## **An ex-post evaluation of 10 years of Conservation Agriculture (CA) promotion in Zimbabwe: Lessons for food security interventions**

The presentation will be based on findings of an ex-post evaluation of 10 years of Christian Care's Conservation Agriculture (CA) programming which started in 2006 and ended in 2014 in five districts of Zimbabwe with funding from the United Church of Canada and the Canadian Foodgrains Bank (CFGFB). The main objectives of the ex-post evaluation is to evaluate the sustainability of CA interventions, the barriers and drivers of sustainable adoption, understand the contribution of CA to food security and the impact of CA on men and women (i.e. access, labor and decision making).

## **Putso Nyathi**

Putso Nyathi is a Conservation Agriculture Technical Officer for Southern Africa with MCC/CFGFB supporting CFGFB funded projects. She works from Pretoria, South Africa and is Zimbabwean. Putso holds a M.S. in Agriculture and Development, a Post Graduate Diploma in Project Planning and Management and a B.S. degree in Agriculture. She has 15 years of experience working with smallholder farmers in both research and development organizations. She served for five years with the International Crops Research Institute for the Semi-Arid Areas (ICRISAT) in Zimbabwe. Putso also worked at CNFA Zimbabwe's USAID-funded project and she was responsible for technical training on Conservation Agriculture and linking farmers to markets. Prior to this she worked as a food security officer with World Vision and as a Training and Coordination Specialist for the Agricultural Extension Service in Zimbabwe under the Ministry of Agriculture.

## **Tropical and subtropical fruit crops for small to moderate farm holdings**

Topics to be presented include, matching the tropical and subtropical fruit crops to local environmental conditions as well as plant space and size management and low-input cultural practices for small holdings (nutrient, water, and pruning). Simple tactics for potential off-season cropping will also be discussed.

## **Jonathan Crane**

Dr. Jonathan Crane, is the Tropical Fruit Crop Specialist with the University of Florida, IFAS, Tropical Research and Education Center, Homestead, FL. He has a Ph.D. in Horticulture from the University of Florida. Dr. Jonathan has 30 years experience with production systems for tropical fruit crops and primarily provides information and programs for local producers.

## **Cold chain 101: You can't always get what you want**

Growing, harvesting, preserving and marketing food that benefits from chilling or freezing is no easy process. Middlemen, lack of education, poor technology transfer, difficult or non-existent agriculture credit, unclear market linkages, tradition, volume and production inconsistencies, lack of enforcement of laws on the books, lack of political will power, etc. all conspire against the producer that tries to raise and market high-value perishable commodities. This session will explore some real life problems and possible solutions that face any farmer, processor, trader or business trying to make more money while keeping food fresh and safe to eat.

## **Dan Gudahl**

Dan Gudahl is currently the Executive Director for Whiterock Conservancy, a 5,500 acre non-profit organization that links people, nature and agriculture located near Coon Rapids, Iowa. Dan spent 2013-2016 leading a USDA-funded project in the Caraga Region of the Philippines called the Philippines Cold Chain Project. He has a M.S. in International Agriculture from California Polytechnic State University - San Luis Obispo. Dan also has food production and marketing experience in Bangladesh, Pakistan and Indonesia as well as 12 countries in sub-Saharan Africa and the USA.

# TUESDAY AFTERNOON SESSIONS

01:30	2:00	2:30	3:00	3:30
<b>Soil life - Part 1</b> Andy Cotarelo	<i>K- Rainforest Clearing</i>	Break	<b>Soil life - Part 2</b> Andy Cotarelo	<i>K - Rainforest Clearing</i>
<b>Grafting - Session 1</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang W</i>		<b>Grafting - Session 2</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang W</i>
<b>Tour of ECHO's farm (English, Spanish, Creole)</b> Martin Price, Cecilia Gonzalez, Rhoda Beutler	<i>J - Bamboo Courtyard</i>		<b>Natural Farming Tour</b> Rick Burnette and Stacy Reader	<i>J - Bamboo Courtyard</i>
<b>Meet the speaker</b> Putso Nyathi	<i>B - Visitor Center</i>		<b>Meet the speaker</b> Dan Gudahl	<i>B - Visitor Center</i>
<b>Fortifying tortillas with chaya</b> Penny Rambacher & Marta Sicajan	<i>H - AT Kitchen</i>		<b>Dryland Farming</b> Bob Hargrave	<i>L - Semi-Arid</i>
<b>Seed bank tour</b> Holly Sobetski	<i>S - Seed Bank</i>		<b>Splitting Bamboo</b> Elliot Toevs and Ekachai Jaja	<i>H - AT Kitchen</i>
<b>Lesson on resiliency: Preemptive tree management</b> ECHO Staff and Dr. Jonathan Crane	<i>F - PLC</i>		<b>Access to electricity as the path to empowering individuals and uplifting rural communities in the developing world</b> Richard Hallas	<i>F - PLC</i>
<b>International transitions: Surviving or thriving</b> Ellen Hargrave	<i>D- Ag Tech Classroom</i>		<b>Flowering and influences of flowering of tropical fruit crops</b> Dr. Jonathan Crane	<i>D - Ag Tech Classroom</i>

## TUESDAY AFTERNOON SESSIONS I (1:30 - 2:30)

Complete profiles of all session speakers are available in the Session leader bios section of this book

<b>Soil life - Part 1</b> Andy Cotarelo, ECHO's Farm Manager	<i>K - Rainforest Clearing</i>
Part 1 of 2 discussing the importance of soil life in the farming system. We will talk about ECHO's experience with understanding soil life and how it impacts the small-scale farmer. The workshop will be a mixture of sit-down discussion as well as looking at some examples of systems that have stewarded the "livestock" in the soil.	
<b>Grafting - Session 1</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang - West</i>
Grafting tropical fruit and nut trees is such a popular subject that every year ECHO has grafting workshops at all afternoon sessions. Each afternoon during the first session, the teaching team will determine the interests and experience level of each delegate and then offer personalized instruction. The first session usually involves instruction and demonstration.	
<b>Tour of ECHO's farm (English, Spanish &amp; Creole)</b> Martin Price (English), Founder of ECHO and former CEO Cecilia Gonzalez, ECHO's Latin America & the Caribbean Regional Impact Team Leader, Rhoda Buetler	<i>J - Bamboo Courtyard</i>
This walking tour of the farm will feature some of the lesser known plants and techniques; for example, perennial vegetables and rooftop gardening techniques.	



**Meet the speaker***B - Visitor Center**Putso Nyathi*

See presentation summary and biography from morning talk.

**Fortifying tortillas with chaya***H - AT Kitchen**Penny Rambacher & Marta Sicajan*

Learn how to add chaya and other under-utilized greens to fortify existing food culture with protein, iron, calcium, and more. It is as simple as adding greens to corn tortillas, a staple food item in Central America. Chaya can also be added to beans, rice, and scrambled eggs as well as used to make a nutritious baby food to prevent early onset malnutrition. As a tea, the green helps lower blood sugar for diabetics. Come taste green tortillas hot off the comal in the AT pavilion.

**Seedbank tour***S - Seed Bank**Holly Sobetski, ECHO's Seedbank Manager*

Have you ever wondered how seeds get from the field to a packet? Take a tour of ECHO's seed bank and learn about basic seed saving and storage techniques. Held at the ECHO seed bank, this workshop touches on some basic principles for selecting crops to multiply, growing a crop for seed production, collecting and storing the seed, and then monitoring quality/viability of stored seeds. This tour will include information on how development practitioners can store high-value seeds under proper conditions in areas where electricity is not available for dehumidifying or cooling.

**Lesson on resiliency: Pre-emptive tree-size management***F - Peckham Learning Center (PLC)**ECHO Staff and Dr. Jonathan Crane*

This session will look at strategies to mitigate hurricane damage to fruit trees through preventative pruning and tree size management. During the session there will be opportunity to tour ECHO's fruit tree arboretum and discuss tree size management practices and learn from ECHO's recent experience recovering from hurricane Irma.

**International transitions: Surviving or thriving***D - Ag Tech Classroom**Ellen Hargrave*

Those of us involved in international mission or development work find ourselves leaving one culture and entering another and then probably re-entering as well. In this workshop Ellen will introduce strategies for handling these transitions effectively.

**Tuesday's lunch generously provided by:**

New Hope Presbyterian Church

Northside Baptist Church

Buckingham Presbyterian Church

# TUESDAY AFTERNOON SESSIONS II (3:00 - 4:00)

<b>Soil life- Session 2</b>	<i>K - Rainforest Clearing</i>
<i>Andy Cotarelo, ECHO's Farm Manager</i>	
Part 2 of 2 discussing the importance of soil life in the farming system.	
<b>Grafting - Session 2</b>	<i>E - Maintenance Shop Overhang - West</i>
<i>Crafton Clift, David &amp; Jenny Burd</i>	
Grafting tropical fruit and nut trees is such a popular subject that every year ECHO has grafting workshops at all afternoon sessions. Second session delegates who attended any first session will have opportunity to practice grafting techniques they observed.	
<b>Natural Farming Tour</b>	<i>J - Bamboo Courtyard</i>
<i>Rick Burnette, ECHO's Director of Agriculture, Stacy Reader, ECHO's Research &amp; Publication Associate</i>	
See how ECHO harnesses the power of beneficial microorganisms by capturing and culturing indigenous microorganisms (IMO) for improving the soil, fortifying crops, and feeding animals and for producing compost and natural fertilizers.	
<b>Meet the speaker</b>	<i>B - Visitor Center</i>
<i>Dan Gudahl</i>	
See presentation summary and biography from morning talk.	
<b>Dryland farming</b>	<i>L - Semi-Arid</i>
<i>Bob Hargrave, ECHO's Agricultural Consultant</i>	
This is an introduction to dryland farming principles learned from Bob Hargrave's experience in East Africa. This session will be a discussion of the challenges to agriculture, the resources available, and strategies for crop production in semi-arid areas.	
<b>Splitting bamboo into sheets for construction</b>	<i>H - AT Kitchen</i>
<i>Elliot Toevs, ECHO's Appropriate Technology Manager, Ekachai Jaja</i>	
Bamboo is used as a construction material throughout Asia. This one hour workshop will demonstrate how to create bamboo sheets that can be used for flooring, fencing, roofing, and walls.	
<b>Access to electricity as the path to empowering individuals and uplifting rural communities in the developing world.</b>	<i>F - Peckham Learning Center (PLC)</i>
<i>Richard Hallas</i>	
Access to power and building local knowledge in rural Africa is enhancing education, agriculture, and economic growth. Examining the most efficient and affordable use of electricity and best practices through the lens of three case studies: 1) Implementing solar at a small village school project in Tanzania 2) Enhancing and stabilizing the power grid at a large rural campus focused on education and agriculture in western Uganda 3) Bringing renewable energy to the 100 Villages project in Madagascar.	
<b>Flowering and influences of flowering of tropical fruit crops</b>	<i>D - Ag Tech Classroom</i>
<i>Dr. Jonathan Crane</i>	
Dr. Crane will be discussing the flowering and factors that influence flowering in some of the main tropical fruit crops found around the world. This workshop will provide people with a better knowledge of the environmental factors and management strategies that influence flowering and fruit production in these specific fruit crops.	



# TUESDAY EVENING SESSIONS

Room	7:00	Break	8:10
<b>A</b>	<b>Environmental restoration and peace building</b> Birori Dieudonne		<b>Building agricultural extension capacity in post-conflict settings</b> Dr. Austen Moore
<b>B</b>	<b>Urban homegardens: A case study in Fort Myers, FL</b> Marcie Dallmann		<b>Latin America and the Caribbean region discussion group</b> Cecilia Gonzalez, Libby Arcia, & Brian Flanagan
<b>C</b>	<b>The Chaya Project in Zimbabwe</b> Margaret Tagwira		<b>Servant leadership in organic farming</b> Acivo Rhakho
<b>D</b>	<b>Sustainable intensification of smallholder systems in northwest Cambodia</b> Dr. Tom Gill		<b>Small agribusiness development and the benefits to the small-holder farmer</b> David S. Vanderpool

<p><b>Environmental restoration and peace building</b> <span style="float: right;"><i>7:00 - 8:00 Room A</i></span></p> <p><i>Birori Dieudonne</i></p> <p>We will describe how a Biblical basis for work and care of creation integrates people in society and reconciles communities.</p>
<p><b>Urban homegardens: A case study in Fort Myers, FL</b> <span style="float: right;"><i>7:00 - 8:00 Room B</i></span></p> <p><i>Marcie Dallmann</i></p> <p>This session is based on the speaker's research into homegardens in two low-income areas of Fort Myers, FL. A summary of relevant scientific literature will be presented, followed by the research results. These results include a list of plant species, and descriptions of homegarden structure, functions and constraints. It is hoped that this session will increase participants' understanding of the importance of homegardens to household nutrition, health and culture.</p>
<p><b>The Chaya Project in Zimbabwe</b> <span style="float: right;"><i>7:00 - 8:00 Room C</i></span></p> <p><i>Margaret Tagwira</i></p> <p>Margaret Tagwira will share about the successful promotion of chaya in Zimbabwe</p>
<p><b>Sustainable intensification of smallholder systems in northwest Cambodia</b> <span style="float: right;"><i>7:00 - 8:00 Room D</i></span></p> <p><i>Dr. Tom Gill</i></p> <p>Sustainable intensification of Cambodian rice systems through the integration of horticulture and livestock production shows promise by increasing the opportunity for smallholders to access new markets, increase incomes, and improve dietary diversity.</p>



**Building agricultural extension capacity in post-conflict settings**

8:10 - 8:40 Room A

*Dr. Austen Moore*

Agricultural extension plays a fundamental role in advancing agricultural development in post-conflict countries. Dr. Moore will elaborate the impacts of different extension policy approaches and practices in post-conflict settings and identify the key elements needed to rebuild agricultural extension systems and programs in such contexts. He will discuss key strategies, successes and failures, and lessons learned from multiple countries' experiences and issues involved in rebuilding their extension systems. Those involved in public and private agricultural policy-making and programming will gain insights towards strengthening extension systems in even the most challenging environments.

**Latin America and the Caribbean region discussion group**

8:10 - 8:40 Room B

*Cecilia Gonzalez, ECHO's Regional Impact Team Leader for the Latin America and Caribbean Region,  
Libby Arcia, ECHO's Latin America and Caribbean Region Administrative Assistant  
Brian Flanagan, ECHO's Director of Agricultural Training*

This session is a time for those interested in of the Latin America and Caribbean Region to connect and discuss the future of ECHO's work in the region.

**Servant leadership in organic farming**

8:10 - 8:40 Room C

*Acivo Rhakho*

The Asian Rural Institute teaches servant leadership on an organic farm. Hear from a graduate how that impacted her work in Cambodia and Northeast India. Learn how you could get involved as a volunteer, intern or participant at ARI.

**Small agribusiness development and the benefits to the smallholder farmer**

8:10 - 8:40 Room D

*David S. Vanderpool*

In this session David will address the needs (education, capital, risk management), skills (minimizing post-harvest loss, variety selection), types of techniques (pruning, soil fertility, livestock breeding), and success stories relating to small agribusiness.

# WEDNESDAY MORNING SESSIONS

9:00	9:30	10:00	10:30	11:00	11:30
Post-conflict agriculture	Integrating nutrition education into community agricultural programs		Break	Farmer-led research on agroecology and nutrition in Malawi and Tanzania	

## **Post-conflict agriculture**

As development practitioners, researchers, and changemakers we are confronted by situations in which armed conflict has torn apart the physical and social structures of societies. Smallholder farmers are deeply impacted and often take part in these conflicts. Rebuilding small holder agriculture in these settings is difficult and complicated. The speaker will explain the impacts of conflict on smallholder farmers and discuss constraints and strategies for assisting farmers and communities to recover from armed conflict. The problem of perpetual low intensity conflict will also be addressed along with suggestions for helping ethnic minority communities retain food sovereignty in post-conflict settings.

## **Dr. Joshua Ringer**

Dr. Joshua Ringer has been working in international agricultural development since 1995. He is a Research and Teaching Visiting Professor in the Horticulture Department, Oklahoma State University. His domestic research helps answer questions about Sovereign Tribal Nation Food Systems. Dr. Ringer is also CEO of Indigdev LLC which is a consulting company that partners with smallholder farmers to develop sustainable food and agricultural solutions. He has a Ph.D. in Agricultural Education and Extension and MSc in Soil Science. Joshua has fifteen years of international development experience in Southeast Asia.

## **Integrating practical nutrition education into community agricultural programs**

For too long agriculture and nutrition have been separate sectors of development. Producing more food does not insure less child malnutrition in farm families. What are some practical high-impact actions that every family can do to have children who can survive and thrive? How can a development worker best share these life-saving messages with the community?

## **Kathy Bryson**

Kathy Corson Bryson was born in Costa Rica and spent her childhood in Puerto Rico, Bolivia, and Haiti. She is the International Training Director of SIFAT, a non-profit focusing on "sharing God's love in practical ways." SIFAT, founded in 1979 by Kathy's parents, is a ministry supported by the United Methodist Church. Kathy attended Asbury College and Wheaton College, majoring in Sociology and Biology. Later, she received a Master's degree in Public Health specializing in International Maternal and Child Health from UAB and a second Master's degree in Hispanic Studies from Auburn University. Kathy and her husband David lived and worked together with marginalized peoples in Bolivia, Ecuador, Venezuela, and Mexico. Her current work is in Honduras and Haiti.

## **Farmer-led research on agroecology and nutrition in Malawi and Tanzania**

Agroecology is a holistic approach to farming which takes into account social, environmental, and health concerns of food production. A long-term participatory research project with smallholder farmers in Malawi and Tanzania using agroecology will be discussed. In this research project, farmers experimented with different methods and carried out different community educational activities including theatre, sharing recipes and farmer exchanges. The overall goal is to improve farmer knowledge, families' food availability, and nutrition all while ensuring healthy soils.

## **Dr. Rachel Bezner Kerr**

Rachel Bezner Kerr, Ph.D., is an Associate Professor in Development Sociology at Cornell University. She has published over 40 articles and book chapters in journals such as *Proceedings of the National Academy of Sciences*, *World Development*, and *Food Policy*. For the past 17 years, Dr. Bezner Kerr has worked with the Soils, Food and Healthy Communities organization in Malawi, and her work was highlighted by the UN Special Rapporteur on the Right to Food in her Malawi report.

# WEDNESDAY AFTERNOON SESSIONS

01:30	2:00	2:30	3:00	3:30
<b>Meet the speaker</b> Dr. Josh Ringer	<i>B - Visitor Center</i>	Break	<b>Practical lessons about managing a non-profit organization</b> Dr. Martin Price	<i>B - Visitor Center</i>
<b>Grafting - Session 1</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang W</i>		<b>Grafting - Session 2</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang W</i>
<b>Meet the speaker</b> Kathy Bryson	<i>N - Global Classroom</i>		<b>Cooking perennial greens</b> Rhoda Beutler	<i>H - AT Kitchen</i>
<b>Appropriate Technology (AT) demonstration tour</b> Elliot Toevs & Savannah Froese	<i>J - Bamboo Courtyard</i>		<b>Making earthen bricks</b> Elliot Toevs	<i>M - AT Pavillion</i>
<b>Fruit tree propagation techniques</b> Lydia Hoffland	<i>G - Potting Up Shed</i>		<b>Fortifying local foods with leaf powder to combat child micro-nutrient deficiencies</b> Andrea Suarez	<i>N - Global Classroom</i>
<b>Cooking with breadfruit</b> Mary McLaughlin	<i>H - AT Kitchen</i>		<b>Financial literacy for development workers</b> Tina Ugland	<i>D - Ag Tech Classroom</i>
<b>Agroecology applications</b> Stacy Reader	<i>M - AT Pavilion</i>		<b>Agroforestry tour</b> Tim Watkins, Marcie Dallmann, & Rick Burnette	<i>J - Bamboo Courtyard</i>
<b>Breaking the poverty cycle</b> Tim Albright	<i>F - PLC</i>		<b>Meet the speaker</b> Dr. Rachel Bezner Kerr	<i>F - PLC</i>

## WEDNESDAY AFTERNOON SESSIONS I (1:30 - 2:30)

*Complete profiles of all session speakers are available in the Session Leader Bios section of this book*

<b>Meet the speaker</b> Dr. Josh Ringer	<i>B - Visitor Center</i>
See presentation summary and biography from morning talk.	
<b>Grafting - Session 1</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang - West</i>
Grafting tropical fruit and nut trees is such a popular subject that every year ECHO has grafting workshops at all afternoon sessions. Each afternoon during the first session, the teaching team will determine the interests and experience level of each delegate and then offer personalized instruction. The first session usually involves instruction and demonstration.	
<b>Meet the Speaker</b> Kathy Bryson	<i>N - Global Classroom</i>
See presentation summary and biography from morning talk.	
<b>Appropriate Technology (AT) demonstration tour</b> Elliot Toevs, ECHO's Appropriate Technology Manager & Savannah Froese, AT Intern	<i>J - Bamboo Courtyard</i>
ECHO's Appropriate Technology (AT) department is working to teach relevant ideas that can be used to help with the basic needs of food, water, and shelter. This tour will focus on technologies such as pumps, water collection and treatment, and more.	



<p><b>Fruit tree propagation techniques</b>  <i>Lydia Hoffland, ECHO's Propagation Manager</i></p> <p>This workshop will present the basics of vegetative propagation of fruit trees in a small-scale nursery setting. Learn from practical demonstrations of a variety of techniques used to multiply major fruit crops in a development context.</p>	<p><i>G - Potting Up Shed</i></p>
<p><b>Introduction to utilizing breadfruit</b>  <i>Mary McLaughlin</i></p> <p>Learn about breadfruit; production, processing, and how to cook with it.</p>	<p><i>H - AT Kitchen</i></p>
<p><b>Agroecology applications</b>  <i>Stacy Reader, ECHO's Research &amp; Publication Associate</i></p> <p>Often times we, as practitioners, can become so focused on our initiatives and specialties, that we miss vital parts of our agriculture or food systems that are going on around us. There may be social, economic, spiritual and/or environmental factors that are affecting an agricultural community. If you take the time to stop and look at how these pressures and forces are acting throughout the community, you can understand better your impact, as well as your potential role in the health of the overall system. In this workshop, we will take a look at interactions occurring in parts of ECHO's global demonstration farm as well as interactions occurring in some of our own situations.</p>	<p><i>M - AT Pavillion</i></p>
<p><b>Breaking the poverty cycle</b>  <i>Timothy Albright, ECHO's Chief Operations Officer</i></p> <p>This talk will focus on some of the challenges that small-scale farmers face when trying to implement change and how we, as facilitators, can identify and invest in agents of transformation while we accompany them on their journey from poverty towards resilience.</p>	<p><i>F - Peckham Learning Center (PLC)</i></p>

**Today's lunch generously provided by:**

Christ Community Church  
 St. Hillary's Episcopal Church

# WEDNESDAY AFTERNOON SESSIONS II (3:00 - 4:00)

<b>Practical lessons about managing a non-profit organization</b>	<i>B - Visitor Center</i>
<i>Dr. Martin Price, Founder of ECHO and former CEO</i>	
<p>This talk is a rapid-fire discussion of many principles that continue to serve me well in leading or consulting with non-profit organizations. These are principles that pop out immediately in the right situation and guide me in how I respond to certain situations. It is surprising how many people end up being leaders and managers in the NGO world who have had no training and little time to develop a set of core values of practical management ideas.</p>	
<b>Grafting - Session 2</b>	<i>E - Maintenance Shop Overhang - West</i>
<i>Crafton Clift, David &amp; Jenny Burd, and Lloyd Marsh</i>	
<p>Second session delegates who attended any first session will have opportunity to practice grafting techniques they observed.</p>	
<b>Cooking with perennial greens</b>	<i>H - AT Kitchen</i>
<i>Rhoda Beutler</i>	
<p>Perennial greens are often a mystery to incorporate into cooking. Rhoda Beutler brings her expertise to share with us.</p>	
<b>Making earthen bricks</b>	<i>M - AT Pavillion</i>
<i>Elliot Toevs, ECHO's Appropriate Technology Manager &amp; Savannah Froese, AT Intern</i>	
<p>Learn simple techniques for brick making with clay and other readily available natural materials.</p>	
<b>Fortifying local foods with leaf powder to combat child micro-nutrient deficiencies</b>	<i>N - Global Classroom</i>
<i>Andrea Suarez</i>	
<b>Financial literacy for development workers</b>	<i>D - Ag Tech Classroom</i>
<i>Tina Ugland, ECHO's Director of Finance</i>	
<p>This is an introduction to basic bookkeeping and accounting concepts. It will be presented in an easily understandable way that is meant to demystify accounting terms and concepts. The objective is to provide a level of understanding that will create a foundation for the accounting work that you may be responsible for.</p>	
<b>Agroforestry tour</b>	<i>J - Bamboo Courtyard</i>
<i>Tim Watkins, ECHO's Head of Agriculture Operations, Rick Burnette, ECHO's Director of Agriculture, Marcie Dallmann</i>	
<p>This tour introduces the concept of agroforestry and presents various examples of agroforestry systems at ECHO.</p>	
<b>Meet the speaker</b>	<i>F - Peckham Learning Center (PLC)</i>
<i>Dr. Rachel Bezner Kerr</i>	
<p>See Presentation summary and biography from morning talk.</p>	



# WEDNESDAY EVENING SESSIONS

Room	7:00	Break	8:10
<b>A</b>	<b>Africa University small farm resource center</b> Fanuel Tagwira		<b>Climate change and food security. What are the risks and how can we prepare?</b> Dr. Janet Lewis
<b>B</b>	<b>Options for sustainable production after deforestation of tropical rainforests</b> Dwight Carter		<b>Education unbounded</b> Julia Pettengil
<b>C</b>	<b>Context: Its impact on implementation of agriculture and servant leadership</b> Bev Abma		<b>Principles of biblical stewardship vs. humanistic or extreme environmentalism</b> Dan Janzen
<b>D</b>	<b>Poster session</b> Facilitated by Dr. Tim Motis & Stacy Reader		<b>A brief history of rambutan in Central America</b> Dwight Carter

<b>Africa University small farm resource center</b> <i>Fanuel Tagwira</i>	<u>7:00 - 8:00 Room A</u>
<b>Options for sustainable production after deforestation of tropical rainforests</b> <i>Dwight Carter</i> Observations on the history of the replacement of old growth tropical forest in Northern Guatemala: Agricultural migrations, traditional milpa, cattle, rubber, oil palm, and tropical fruit production.	<u>7:00 - 8:00 Room B</u>
<b>Context: Its impact on implementation of agriculture and servant leadership</b> <i>Bev Abma</i> Results of a study of more than 220 graduates from the Asian Rural Institute in Japan living in 11 countries, show that context contributes significantly to success and/or challenges in implementing agriculture and servant leadership skills. Bev will share specific examples and participants will have opportunity to learn from each other.	<u>7:00 - 8:00 Room C</u>
<b>Poster session</b> <i>Facilitated by Dr. Tim Motis &amp; Stacy Reader</i> During ECHO Florida's third annual poster session, attendees who submitted a poster will present their research findings.	<u>7:00 - 8:00 Room D</u>
<b>Climate change and food security. What are the risks and how can we prepare?</b> <i>Dr. Janet Lewis</i> This workshop will begin with a brief primer on the science of global warming and the projections of climate change. Participants will then engage in a discussion to 1) highlight risks regarding the impacts of climate change on their communities and 2) identify "next steps" to be proactive to improve food security and social resilience. Let's bring our minds and experience together to share concerns and improve our future outlook.	<u>8:10 - 8:40 Room A</u>



**Education unbounded**

8:10 - 8:40 Room B

*Julia Pettengil*

Julia will describe a model and continuum of education that is using a two-generation approach, (back home projects and community-led rural development initiatives) to equip students to become powerful change agents in rural western Uganda.

**Principles of biblical stewardship vs. humanistic or extreme environmentalism** 8:10 - 8:40 Room C*Dan Janzen*

How do we distinguish between what are practical approaches to stewarding the environment and what is a fad or worse, diminishes the ability of mankind to pass on an improved heritage to the next generation? How do the scriptures guide us in exposing error in extreme environmentalism and find the truth in biblical stewardship? This will challenge some of our deeply held values and expose them to scrutiny through examining their impact on whether or not they enhance our strategies to fulfill the Great Commission and allow us to responsibly improve our capacity to serve the needs of others, particularly those less fortunate than ourselves.

**A brief history of rambutan in Central America**

8:10 - 8:40 Room D

*Dwight Carter*

This session will focus on the economic effects for small scale growers, vendors, and consumers.

# THURSDAY MORNING SESSIONS

8:45	9:00	9:30	10:00	10:30	11:00
A new approach in aquaculture development in developing countries: The Haiti model		Moringa-coated sand filters as a sustainable solution for clean water	Break	Dialogue education and farmers	

<p><b><u>A new approach in aquaculture development in developing countries: The Haiti model</u></b></p> <p>This plenary presentation will discuss how developing countries (especially Haiti) can be competitive in aquaculture production and protect their environment. Even though world food fish aquaculture rose to over 70 million tons in 2015, developing countries contributed less than 8% in volume and 3% in revenues. The plenary session will show that by duplicating the Haiti example in other countries it is possible to increase contributions in volume and in revenues.</p>	<p><b>Dr. Valentin Abe</b></p> <p>Dr. Valentin Abe is the founder of Caribbean Harvest and the Caribbean Harvest Foundation. He has spent more than 15 years developing large-scale production of tilapia and commercial fish farms in Haiti. Dr. Valentin has a Ph.D. in Aquaculture from Auburn University and is globally recognized as one of the most effective leaders making a difference in Haiti. He has been chosen as one of Time Magazine's 100 Most influential People in 2010, the 2011 Digicel Entrepreneur of the Year in Haiti and the 2013 Auburn University Most Outstanding Alumni.</p>
<p><b><u>Moringa-coated sand filters as a sustainable solution for clean water</u></b></p> <p>Traditional water treatment using moringa seeds only removes 90 – 99% of pathogens while allowing fouling of the water over time. Over the past seven years Dr. Velegol's research group has created an innovative and sustainable process that solves these two problems. When crushed seeds are added to water and then mixed with sand the antimicrobial, moringa oleifera cationic protein (MOCP) in the seeds adsorbs to the sand creating "sticky killer" sand. She will discuss experimental results and theoretical modeling to show how this sand can be used to remove 99.99% of pathogens and produce clean and storable drinking water.</p>	<p><b>Dr. Stephanie Velegol</b></p> <p>Dr. Stephanie Butler Velegol received her B.S. in Chemical Engineering from Drexel University and her Ph.D. in Chemical Engineering from Carnegie Mellon University. She has been on the Penn State Engineering faculty for the last 10 years teaching and doing research on water and wastewater treatment. Dr. Velegol has advised over a dozen students on an innovative use of moringa seeds for sustainable water treatment.</p>
<p><b><u>Dialogue education and farmers</u></b></p> <p>In this session we will explore how seven steps of learning design, "4 A's" for designing learning activities, and taking account of cognitive domains and learning styles can energize the farmer-teacher interaction. The ideas we will use in this session are based on the teachings of Jane Vella (<u>Learning to Listen, Learning to Teach</u>) and trainings offered by Global Learning Partners. World Renew practitioners have been experimenting with these ideas for over 15 years.</p>	<p><b>Dr. Tom Post</b></p> <p>Dr. Tom Post is currently the Regional Team Leader for World Renew in Asia, focusing on Bangladesh, India, Laos, and Cambodia. He has worked for the Peace Corps in Belize, in bilingual education with the Grand Rapids Public Schools and for World Renew in Honduras, Mexico, Belize, Costa Rica, and Kenya. Dr. Post has worked in a range of tropical agricultural environments: from semi-arid in Mexico and Kenya, to humid-tropical in southern Belize and Laos. He did his Ph.D. research in Belize on soil fertility restoration with legume cover crops and farmer experimentation/learning. Dr. Post has a B.A. in Biology and Secondary Education, a M.A. in Bilingual Education, a M.S. in Agronomy and Certificates in Latin American Studies and Tropical Agriculture, and a Ph.D. in Development Studies.</p>

# THURSDAY AFTERNOON SESSIONS

1:30	2:00	2:30	3:00	3:30
<b>Sustainable soil management for gardens</b> Josh Jamison	<i>B- Visitor Center</i>	Break	<b>An agricultural extension demonstration farm template &amp; community development project</b> Grace and Alan Baldwin	
<b>Grafting - Session 1</b> Crafton Clift, David & Jenny Burd	<i>E - Maintenance Shop Overhang W</i>		<b>Grafting - Session 2</b> Crafton Clift, David & Jenny Burd	
<b>Chapin Drip Irrigation field demonstration</b> Doug Carlson and David Balsbaugh	<i>L - Semi-Arid</i>		<b>Founder's tour</b> Dr. Martin Price	
<b>Raising third culture kids</b> Ellen Hargrave	<i>M - AT Pavilion</i>		<b>Meet the speaker</b> Dr. Tom Post	
<b>Food waste to fuel and fertilizer</b> Dr. Thomas Culhane	<i>H - AT Kitchen</i>		<b>Food waste to fuel and fertilizer</b> Dr. Thomas Culhane	
<b>Green manure/cover crops</b> Dr. Tim Motis	<i>F - PLC</i>		<b>Principles of community development</b> Tim Albright	
<b>Working effectively with the poor</b> James Ardill	<i>D - Ag Tech Classroom</i>		<b>ICT Round Table</b> Nate Flood and Steve Snyder	
<b>Meet the speaker</b> Dr. Stephanie Velegol	<i>N - Global Classroom</i>		<b>Meet the speaker</b> Dr. Valentin Abe	

## THURSDAY AFTERNOON SESSIONS I (1:30 - 2:30)

*Complete profiles of all session speakers are available in the Session Leader Bios section of this book*

<b>Sustainable soil management for gardens</b> <i>Josh Jamison</i>	<i>B - Visitor Center</i>
This talk will cover the theory and practice of managing soils in garden settings with an emphasis on organic and ecological methods. Discussed techniques will be catered towards infertile tropical soils that are appropriate for developing world situations such as homesteads, orphanages, or school gardens. Topics will include the importance of soil life and uses of readily available amendments such as compost, manure, biochar, and mulches.	
<b>Grafting - Session 1</b> <i>Crafton Clift, David &amp; Jenny Burd</i>	<i>E - Maintenance Shop Overhang W</i>
Grafting tropical fruit and nut trees is such a popular subject that every year ECHO has grafting workshops at all afternoon sessions. Each afternoon during the first session, the teaching team will determine the interests and experience level of each delegate and then offer personalized instruction. The first session usually involves instruction and demonstration.	
<b>Chapin Drip Irrigation field demonstration</b> <i>Doug Carlson and David Balsbaugh</i>	<i>L - Semi-Arid</i>
A simple bucket drip irrigation system is being used worldwide to enable small-scale farmers to produce vegetables during either dry seasons or drought conditions. A demonstration of this drip irrigation system will be presented as well as various other improved gardening technologies to assist in food security programs.	



<b>Raising third culture kids</b>	<i>M - AT Pavilion</i>
<i>Ellen Hargrave</i>	
<p>This workshop will be a time to think through and talk about educating and raising the most important resource that God has given us - our children in a culture other than the one that their parents have come from. What are some of the challenges? What is best for each child? Although each setting and child is unique, there are many ideas and experiences that we can share to help each other in the journey. Ellen will also be available for private meetings throughout the week.</p>	
<b>Food waste to fuel and fertilizer</b>	<i>H - AT Kitchen</i>
<i>Dr. Thomas Culhane</i>	
<p>Going from food "waste" to useful fuel and fertility may be the simplest yet least well understood of appropriate technologies. At Solar CITIES NGO we champion home and community scale biodigesters and biogas as a core solution to our sustainability challenges. In this workshop we demonstrate hands-on with the open source Solar CITIES IBC tank biodigester system developed by Dr. Culhane that students and faculty from the USF Patel College of Global Sustainability built with ECHO. Anybody anywhere in the world can create a reliable and highly functioning biodigester out of locally available materials that can take a bucket of food scraps and create enough smoke-free, clean burning, safe bio-methane to cook three meals a day and a bucket of high quality liquid fertilizer for closing the cycle and growing nutritious food. The workshop takes participants through the theory and practical applications and design principles of small-scale biogas, comparing the systems now at ECHO with other sizes and designs used around the world. The end goal is to help foster a trainer-of-trainer model for accelerating the diffusion of this technology around the world to improve, and in many cases, save lives.</p>	
<b>Green manure/cover crops</b>	<i>F - Peckham Learning Center (PLC)</i>
<i>Dr. Tim Motis, ECHO's Director of Research and Ag Tech</i>	
<p>Dr. Motis will present an overview of the use of tropical legumes as green manure/cover crops. Drawing on findings from ECHO research, this talk will cover 1) benefits of legumes, 2) basic characteristics and growth requirements of some commonly grown legumes, and 3) ways to integrate these into smallholder farming systems. Some initial information will be presented via PowerPoint, followed by a farm walk to take a look at legumes being grown at ECHO.</p>	
<b>Working effectively with the poor</b>	<i>D - Ag Tech Classroom</i>
<i>James Ardill</i>	
<p>Based on "When Helping Hurts" and "Toxic Charity" this interactive discussion exposes development done poorly as well as tools to understand the poor in addition to solutions that create healthy partnerships and prevent unhealthy dependencies.</p>	
<b>Meet the speaker</b>	<i>N - Global Classroom</i>
<i>Dr. Stephanie Velegol</i>	
<p>See Presentation summary and biography from morning talk.</p>	

**Today's lunch generously provided by:**  
Lee County Homeschoolers

# THURSDAY AFTERNOON SESSIONS II (3:00 - 4:00)

<p><b>An agricultural extension demonstration farm template &amp; community development project</b></p>	<p><i>B - Visitor Center</i></p>
<p><i>Grace Baldwin and Alan Baldwin</i></p>	
<p>This workshop provides insight into an ongoing project proposed by the Methodist Church Ghana during a Global Resource Connections Inc (GRC) Mission's trip. The purpose of the project was the development of a master plan demonstration farm template which is being used to create an extension education farm located in Amakom, Lake Bosomtwe, Ghana West Africa. The facility will serve as a working demonstration example of improved agricultural methods to the Lake Bosomtwe community. This situation is specifically located within an impact crater composed of soil with volcanic origin.</p>	
<p><b>Grafting - Session 2</b></p>	<p><i>E - Maintenance Shop Overhang W</i></p>
<p><i>Crafton Clift, David &amp; Jenny Burd</i></p>	
<p>Second session delegates who attended any first session will have opportunity to practice grafting techniques.</p>	
<p><b>Founder's tour</b></p>	<p><i>J - Bamboo Courtyard</i></p>
<p><i>Dr. Martin Price, Former CEO and Founder of ECHO</i></p>	
<p>A tour of ECHO provided by ECHO's Founder, Martin Price.</p>	
<p><b>Meet the speaker</b></p>	<p><i>M - AT Pavilion</i></p>
<p><i>Dr. Tom Post</i></p>	
<p>See Presentation summary and biography from morning talk.</p>	
<p><b>Food waste to fuel and fertilizer</b></p>	<p><i>H - AT Kitchen</i></p>
<p><i>Dr. Thomas Culhane</i></p>	
<p>See description on previous page.</p>	
<p><b>Principles of community development</b></p>	<p><i>K - Rainforest Clearing</i></p>
<p><i>Tim Albright, ECHO's Chief Operations Officer</i></p>	
<p>This will be a brief review and discussion on what does and does not constitute community development. Different levels of interaction within community development will be explored considering some of the dangers of dependency and the importance of empowerment.</p>	
<p><b>ICT Round Table</b></p>	<p><i>D - Ag Tech Classroom</i></p>
<p><i>Nate Flood, ECHO's Digital Media Specialist, Steve Snyder, ECHO's Digital Media Associate</i></p>	
<p>The use of smart technology in remote regions has increased in the past several years. For example, farmers have cellphone text access to banking and market information. In this roundtable session, participants will have the opportunity to share and learn from others about apps that might be useful to the ECHO network. ECHO will follow up on the apps mentioned for inclusion in a new reference collection on ECHOcommunity.</p>	
<p><b>Meet the speaker</b></p>	<p><i>N - Global Classroom</i></p>
<p><i>Dr. Valentin Abe</i></p>	
<p>See Presentation summary and biography from morning talk.</p>	

