



# Farm from a box™

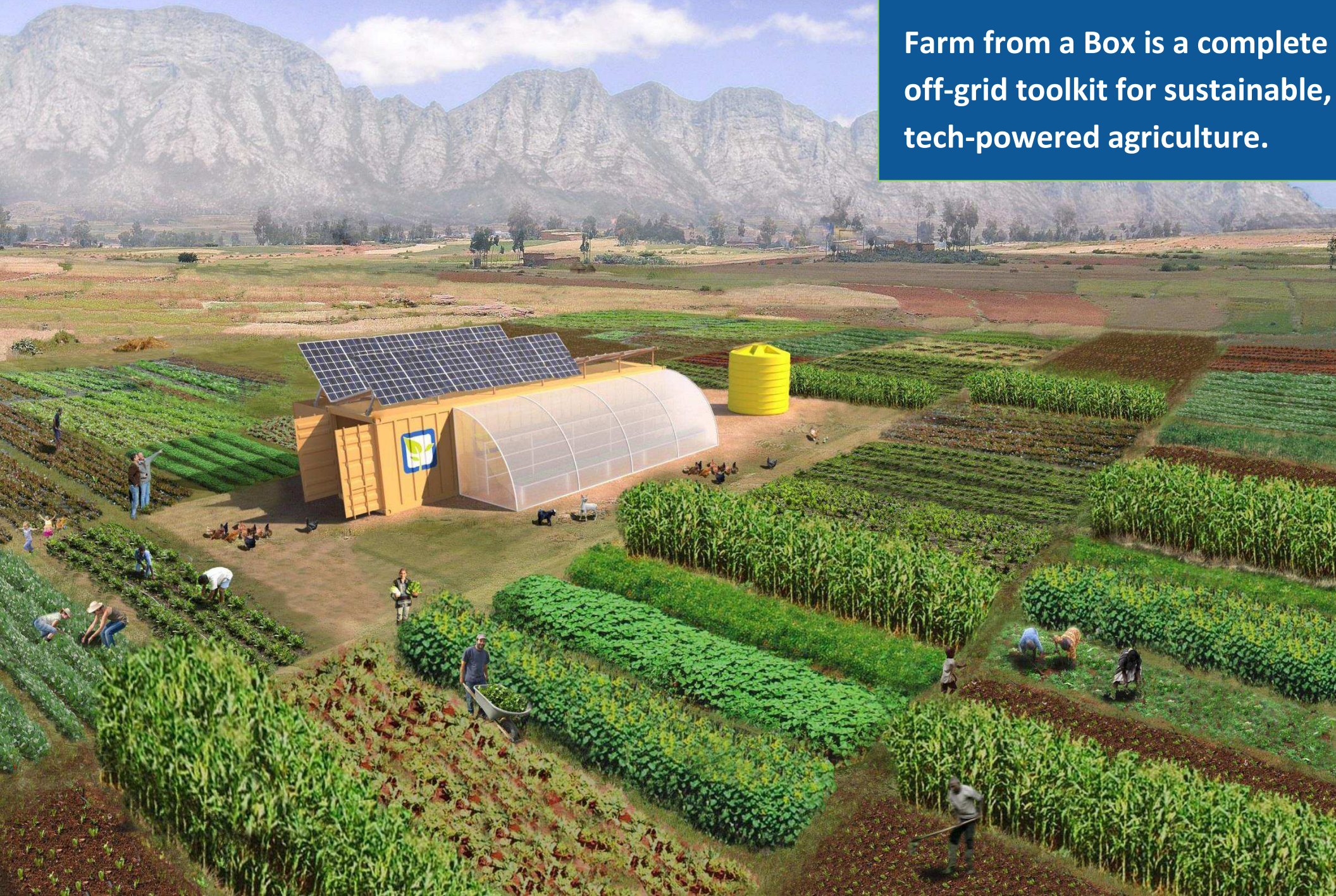
Business Model. Summary 2016



## Legal Disclaimer

- The projections, data and information contained in this Business Model have been produced and processed from sources believed to be reliable; however, no warranty, expressed or implied, is made regarding the accuracy, adequacy, completeness, reliability or usefulness of any such projections, data or information. Any person seeking to make an investment in Farm from a Box should not rely on the information set forth in this Business Model as complete.
- Furthermore, the potential fulfillment of “forward looking statements” contained in this Business Model is subject to change due to unexpected events, market shifts, or circumstances that cannot be known at this time. Forward looking statements are based on expectations, estimates and projections at the time the statements were made that involve a number of economic, business, and numerous risks and uncertainties which could cause actual results or events to differ materially from those presently anticipated. Forward looking statements in this Business Model may be identified through the use of words such as: “projects,” “expects,” “will,” “anticipates,” “estimates” or “believes.” Such estimates and projections are subject to significant uncertainties beyond Farm from a Box’s control. Although such projections are believed to be realistic, no representations are made as to their ultimate attainability.

**Farm from a Box is a complete off-grid toolkit for sustainable, tech-powered agriculture.**





Farm from a Box

## Problem

There are nearly one billion people globally that are consistently undernourished, 50 million people within the U.S. alone. **Global agricultural production has kept pace with population growth over the past 50 years. But those gains came at an unprecedented environmental cost and access to food remains unevenly distributed. Soil damage, climate change, water and energy availability are all putting significant strains on our current agricultural system.**

- Lack of Access to Affordable, Healthy Food
  - Lack of Infrastructure to support reliable production
  - Limited resources in water and energy access
  - Lack of information and training
  - Aging farmer population (average 57 years old in U.S.)
  - High cost/high carbon footprint of shipping food
  - Centralized Food supply, uneven distribution
- ✓ **Provide local access points to healthy food**
  - ✓ **Create quick, deliverable infrastructure to support growth**
  - ✓ **Use off-grid energy technology and water efficient systems**
  - ✓ **Use technology to provide real-time data**
  - ✓ **Reignite interest and education in modern farming**
  - ✓ **Decentralize the food supply, build local food economies, lessen the miles that food travels to increase access**





## Solution

**Farm from a Box addresses this simply by providing a complete off-grid kit for jumpstarting and maintaining a 2 acre farm.** By employing the best of technologies in off-grid power generation, water distribution and IoT to maximize yields in a small area, our system can be the mechanism for a smarter, healthier, more efficient production strategy that boosts local food access. This is critical today where water is at a premium and renewable energy is an outstanding source to support a small farm anywhere in the world!



It's more than simply increasing yields, but also in how we can harness technology to make it a smart farm; where we can monitor and track the performance of the machines/tech remotely, track usage of water and field data so the farmers can make more informed decisions in real-time. Sensors, cloud computing and intelligent software and routers, can transform agriculture and help feed the world's growing population.

Farm from a Box works to bridge the “access” gap by providing appropriate technologies and training that can help build the resilience of communities, increase and stabilize their farm productivity while progressively improving land and soil quality, and ultimately, their integration into the value chain. Tailored to the needs of smallholder farmers, it is the first solution that works to galvanize multiple technologies into one final product, and operate as an end to end value chain, within a single delivery mechanism.



**Farm from a Box has arrived at a revolutionary time where small farms are at the nexus of supplying food to local needs and utilizing existing technologies that help to maximize yields, build the long term health of the soil and minimize water use.**



## WHY NOW: Market Analysis

**Local Food has grown from niche market to booming new economy.** Agtech is an explosive new market sector, surpassing both *fintech* and *cleantech*, as the new “queen of green”, with \$4.6 Billion in funding just last year.

Demand for local food is soaring; 4,322 school districts have farm to school programs, a 430% increase since 2006; regional food hubs increased 288%, and farmers’ markets grew 180%. Federally funded SNAP redemptions at farmers markets increased 620% in the past 7 years, showing the high demand for fresh, local foods in low-income families.

Industry data estimates that U.S. local food sales totaled at least \$12 billion in 2014, up from \$5 billion in 2008. According to data released by the Agricultural Marketing Service's (AMS) National Organic Program (NOP), the number of domestic certified organic operations increased by almost 12 percent between 2014 and 2015, representing the highest growth rate since 2008 and an increase of nearly 300 percent since the count began in 2002. U.S. local food sales totaled at least \$12 billion in 2014, up from \$5 billion in 2008, and experts anticipate that value to hit \$20 billion by 2019.

### TRENDS

**Technology:** Technological advancements are making off-grid energy more and more efficient. Innovation in cloud technology and sensors are rapidly expanding precision agriculture, allowing farms to be more efficient and more automated. Harnessing these tech advancements and making them broadly accessible in one kit, will empower small farmers and help local food production grow exponentially.

**Society:** As evidenced with explosive growth of the sharing economy, communities and individuals are increasingly becoming independent, using their own resources and those of the community to both generate income and provide a service/asset.

Local food economies fall under the societal trend of increased decentralization.

**Regulatory:** New regulations around urban farming, and local food sales are creating broader access for both “new farmers” and local consumers.

**Global Market:** There is a massive shift, even in aid, to building local resilience from the community level up. Investments in rural infrastructure, farmer training, and value chain integration of women and youth, and local food procurement all underline this shift.

“Local food is rapidly growing from a niche market to an integrated system recognized for its economic boost to communities across the country,”



Tom Vilsack  
U.S. Secretary of Agriculture





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## Market Size

**The initial Total Available Market in new farm development and food access within the United States for Farm from a Box is \$107 Billion.**

Our Served Available Market (SAM) is comprised of local food access and education specific spending worth \$8.9 Billion annually. Of this, Farm from a Box will initially target roughly 8% market share (SOM), equivalent to \$790 million annually.

Our initial target market will be in two verticals: education and training, and underserved communities. These are the areas in most immediate demand for our product and also the customer segments that we are currently engaged and piloting with. We are confident that we can secure sizeable market traction in these areas as we have proven interest and successful deployment.

**Education and Training:** Integrate emerging agricultural technologies into academic curriculum and project based learning.

**Farm-to-Table Local Food:** Provide fresh seasonally grown food to local consumers and lower the miles food travels.

**Underserved Communities and Food Deserts:** Supplement the needs of an underserved community and increase access to fresh, nutritious food.

**K-12 School:** Bring science to life for students and integrate nutritious food into the lunchroom.

**Individual/Family:** Turn unproductive land into a farm enterprise.



**Farm to School Nutrition and Education is  
in 42,587 US schools and growing**








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## Competition

Farm from a Box is uniquely positioned among competitors. While companies such as Freight Farms and Podponics utilize a shipping container to produce local food, they grow primarily leafy greens hydroponically inside of the container with LED lighting. Ecosphere PowerCube, while not for food production, is a modified container that provides off-grid power, Wi-Fi and water purification in remote areas. Farm from a Box grows a full crop, outside in the sun and soil, utilizing the container as the secured powerhouse for the off-grid system, Wi-Fi, technology, tools and cold-storage.

**Their competitive advantages and disadvantages:** Internal hydroponic systems have an advantage in that they can create a controlled environment for internal growth regardless of location and climate, also mitigating challenges with pests. They can operate on a small footprint, as it is contained by the size of the shipping container. Their customers can basically rely on a constant amount and quality of growth that a controlled environment will create. The disadvantages of these systems are: 1) limited to growing primarily leafy greens, 2) limited to location as the unit requires grid power and municipal water, 3) limited range of product for buyers. These systems are largely focusing on the urban agriculture market and direct sales to restaurants and grocers.

**New Entrants:** There are a few new entrants into the modular/containerized food production space such as Impact Farm and Urban Farm Unit, and Grow Up. The Urban Farm Unit and Grow Up are both stacked aquaponics system with the greenhouse on the top. They are still limited to the crop they can grow and require grid power. Impact Farm is a vertical greenhouse space, again limited to primarily leafy greens.

Agriculture [Indoor/Hydroponic]		Off-Grid Energy/Water	
	\$82,000		\$140,000
	\$75,000	 <b>Farm from a box™</b>	\$60,000
	\$66,000	<ul style="list-style-type: none"> <li>✓ <u>Grows all crops</u></li> <li>✓ Farm on 2-acres in the sun &amp; soil</li> <li>✓ Powered by renewable energy</li> <li>✓ Deployable in remote areas &amp; cities</li> <li>✓ Diverse applications for broad user/buyer base</li> </ul>	





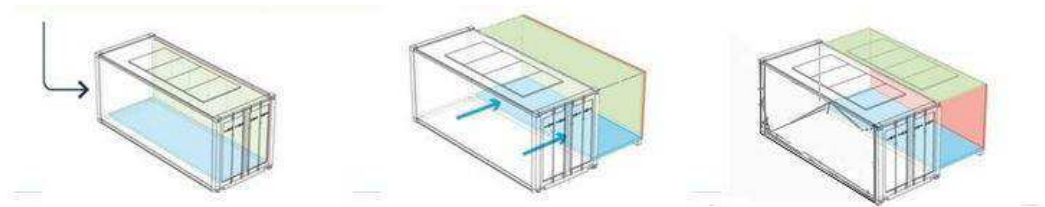
Farm from a Box

## Product

**Each Farm from a Box unit serves 2-acres of land and grows enough crops for roughly supports 150 people annually.**

Built from a modified shipping container, our patent-pending unit contains a complete ecosystem of technologies required to enhance agricultural productivity; from renewable power and irrigation, to Information Communications Technology. The components can be adapted to range of conditions, making this the optimal plug-in for a variety of agricultural technologies.

Each unit is modified to expand and double in size upon deployment. This effectively allows the container to not only act as the vehicle for transporting all of the farm components, but also turn into the secured “barn” and technological powerhouse for the system. This unique design creates a deliverable turnkey solution that doesn’t require any special equipment to deploy.



**Core Features:** Each unit is powered by 3kw of solar energy that provide power to both the water system and the internal Power System. Water System has a solar powered Grundfos submersible pump for use with a ground well [can be interchanged to hook up to a municipal water line]. Pump connects into a water storage tank allowing for greater control of water filtration and fertilizers. The water storage tank moves the water through a pressure tank, metering the flow rate and out to the Netafim Micro-drip irrigation lines. The Power System uses a robust SMA Invertor system to convert the power from the panels, for use with the internal system, charging Deep Cycle batteries. Internal power is made possible with an AC plug-in panel to accommodate ancillary electrical needs; including LED lights, laptop, camera, ventilation, etc. The Box comes Wifi enables for greater information access, which can also be directed towards the sensor technology and cloud system. Optional water purification system provides 7 gallons of clean drinking water per day. Basic farming hand tools are included in the Box.

**Training:** Farm from a Box integrates an innovative 3-part training program as a part of our solution. This training system covers all aspects of the Farm from a Box system: 1- sustainable farming techniques, 2- technology use and maintenance, and 3- basic business skills and enterprise development.





Farm from a Box

**Intellectual Property:** Farm from a Box is patent-pending. Trademarks and Registration has been filed and submitted.

**Key Partners and OEM:** The Farm from a Box system combines “best-in-class” components from globally recognized companies that ensure quality, maximum efficiency, and longevity. This collective team of industry leaders includes Netafim, SMA, and Grundfos. This gives Farm from a Box a sustained competitive advantage within the agricultural sector with its innovative product and proven technology. The interchangeability of the Box’s components makes it a dynamic product that can work in a broad range of applications and climates.



Netafim is the global leader in smart drip and micro irrigation solutions since introducing the world's first drip irrigation system solutions in 1965; serving more than 110 countries across the globe.



As a leading global specialist for photovoltaic system technology, SMA is setting the standards today for the decentralized and renewable energy supply of tomorrow.



Grundfos is the world's largest pump manufacturer, based in Denmark, with more than 18,000 employees globally





## Business Model and Financials

**Farm from a Box will generate revenue through Direct Sales and licensing of the units, [and potentially shared revenue from environmental data].**

**Cost-plus pricing:** Farm from a Box uses cost-plus pricing to assure that all costs, both fixed and variable are covered and the desired profit percentage is attained.

**Sales Distribution Model:** Each Farm from a Box unit is built with interchangeable components allowing the system to fit the specific needs of the user and local climate. After a basic assessment, the product is made to order, and shipped to the buyer’s location. By offering direct-to-consumer sales, costly inventory is reduced; units are tailor-made to order, and the consumer experience is improved with a direct product-buyer relationship.

**Current Status:** Farm from a Box is currently testing its beta units in varying climates and with different user sets in preparation for large scale production and customer order fulfillment.

**Product Price Point:** We are projecting each unit to cost roughly \$40k; the product will retail at \$60k, excluding local delivery and in-person custom training. This price point has been tested with our buyers and has been well received. When sales and production ramp up, the cost per unit will decrease and will reflect higher margin.

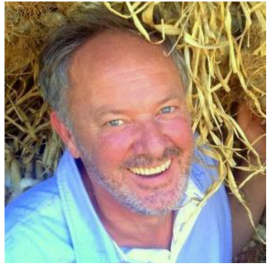
Projected Financial Forecast					
	Y/1	Y/2	Y/3	Y/4	Y/5
Units	4	50	300	750	1500
Revenue	\$240,000	\$2,696,117	\$15,030,912	\$34,606,336	\$71,494,227
Gross Profit	\$80,000	\$1,096,117	\$6,390,912	\$15,166,336	\$32,614,227
Gross Margin	0%	41%	43%	44%	46%
EBIDTA	(\$583,044)	(\$780,806)	\$2,681,767	\$9,012,641	\$22,700,416
EBIDTA %	0%	29%	18%	26%	32%



- ✓ **One Unit = 2 Acre Farm = Provides for 150+ people**
- ✓ **\$60,000 retail price = Can generate \$150,000/year**
- ✓ **Direct to Consumer Sales and Distribution**
- ✓ **Product made to order, reducing costly inventory**



## Team

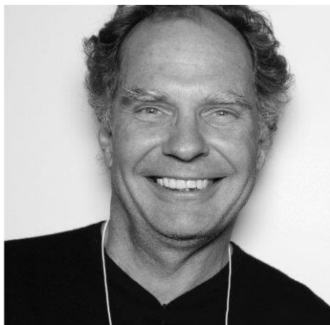


**Founders Brandi DeCarli and Scott Thompson** have worked together for 7 years. Previous to Farm from a Box and TackleBox Lab, they founded Human.kind Philanthropic Advisory Group, where they developed cross-sector partnerships with academic institutions, private corporations, governments, and philanthropic organizations; including the Maya Biosphere Reserve and Worldwatch Institute.

**Brandi** has experience in creating successful strategic campaigns for both nonprofit and for-profit sectors. She specializes in strategic planning, marketing campaigns, and business development. Brandi is a graduate of University of California, Berkeley.

**Scott** has over 16 years of executive and nonprofit experiences, including time spent as Executive Director of the 2008 International Children's Games in San Francisco and as Founder and Executive Director of the San Francisco Sports Council. He specializes in partnership enablement, project management, operations strategy and execution.

### Advisory Board:



**Craig Severance.**

Craig is a founder of Intermodal Structures, steel frame modular buildings that can be rapidly manufactured. He was also a senior partner, Director of Acquisitions at AMB Property Corporation completing over \$3 billion in acquisitions.



**Miguel Altieri, Ph.D.**

Dr. Altieri is a globally recognized expert in agroecological small farm development, and professor of agroecology at UC Berkeley. He is the author of more than 200 publications, and numerous books.



**Ann Veneman.**

Ann was Executive Director of UNICEF until 2010. Prior to that she was Secretary of the United States Department of Agriculture. A lawyer by training, she has practiced law in California and Washington, DC.



**Nina Gardner.**

Nina is Founder/Director of Strategy International. She specializes in corporate sustainability, CSR and public-private partnerships.. She is also an adjunct professor at Johns Hopkins SAIS Business and Human Rights.



**Cari E. Guittard.**

Cari is a founding Principal at Global Engagement Partners (GEP). She specializes in developing tri-sector partnerships, guiding corporations on global affairs and public diplomacy. She also served in senior positions at the US Department of State.