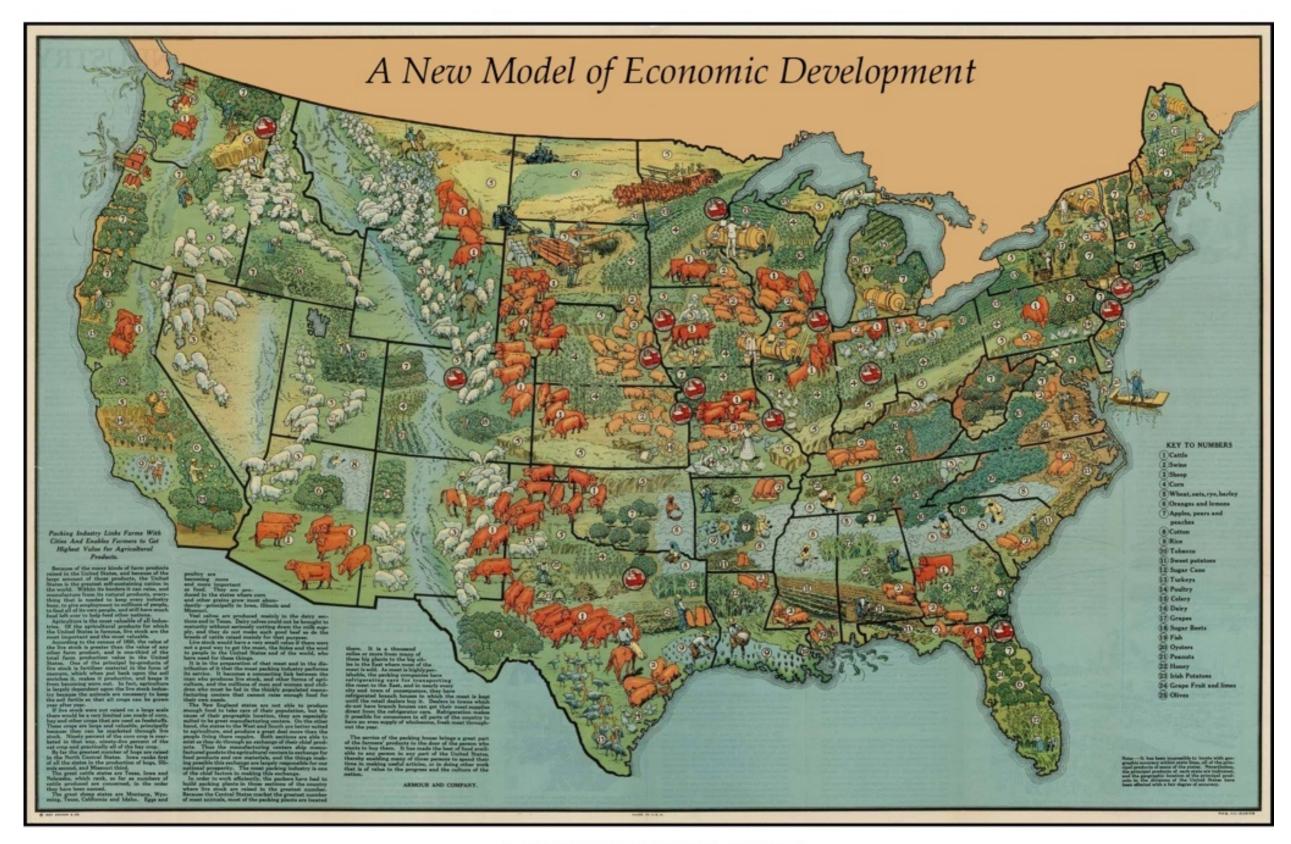
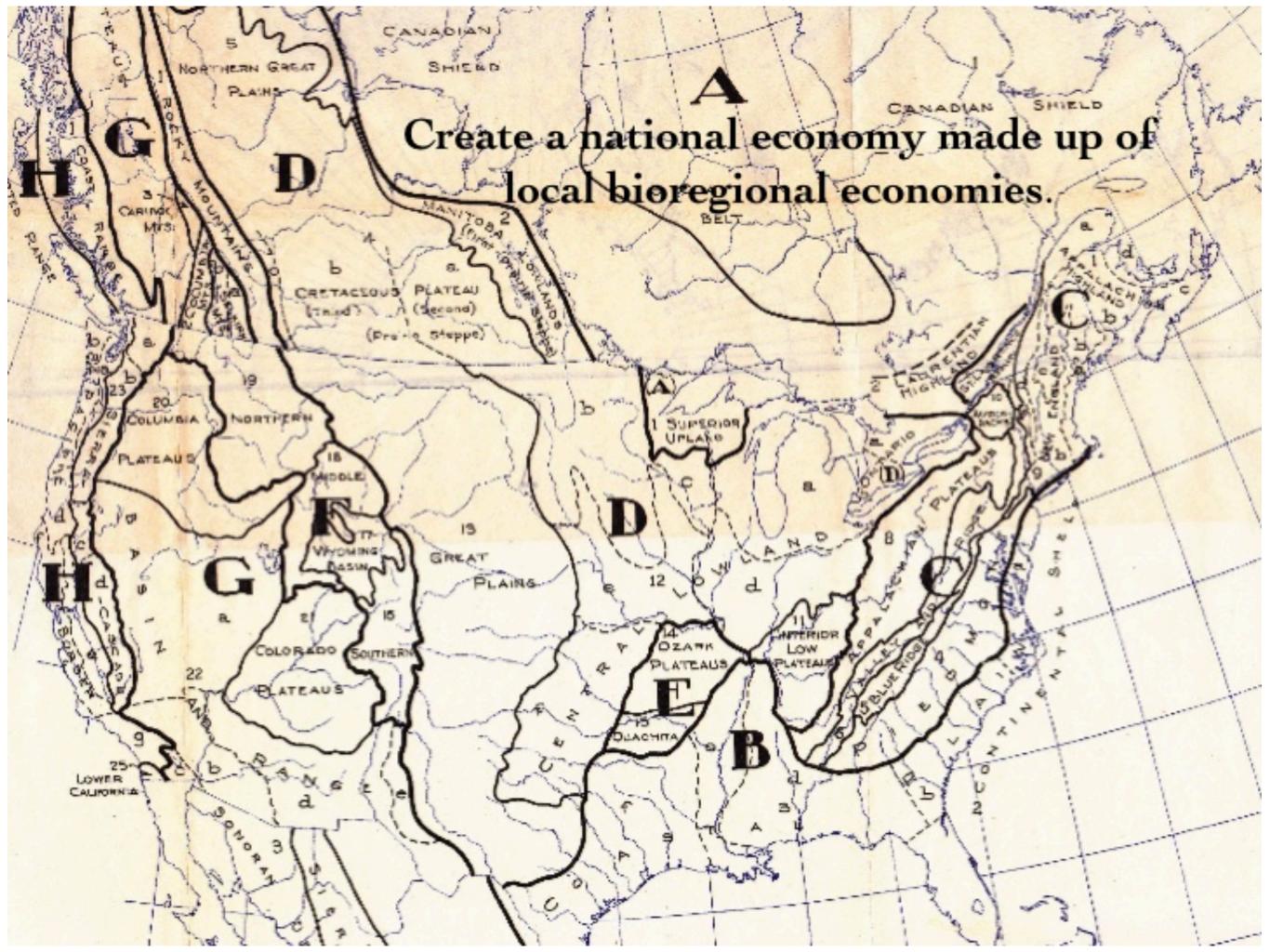
PERMACULTURE ECONOMIES







Bioregional Permaculture

A new model for Economic Prosperity

If we deeply understand what is in our own best interest the old assumption that anthropocentrism is at odds with biocentrism is unfounded.

We are humans from earth. We evolved on this planet over billions of years. We are on a planet 24,901 miles in circumference circling a star 92 millions miles away. We are orbiting around our sun at 65,000 miles per hour and spinning 1000 miles per hour at the equator in an eastward direction. The powerful spin of the earth causes her to bulge 4 miles wider at the equator from the centrifugal force created by the spin. I like to say we are expanding with the universe, spiraling with the galaxy and spinning with the Earth. This helps to highlight that we are nested in many layers of complex systems and scales when we look at life and ourselves in our complete context. The Earth is an ancient, dynamic, and complex home for our species and all life as we know it.

The earth is our home. We have evolved to adapt to the fluxes and flows of nature. The Earth is dated by geologists to be around 4.5 billion years old. The Universe that spawned her came into being around 13.6 billion years ago. It took over 9 billion years of stars living and dying to create the massive cloud of stellar dust that the earth coalesced from. This stardust is what makes up all life and non-life on this planet including our entire bodies! The silica in your thumbnail had to be created in the center of a star in another solar system and that star went through its entire life cycle and exploded and settled into this planet to become a part of your fingernail, according to modern physics.

Our inheritance is ancient and primordial. We rarely step back to fathom the implications of physics, geology, chemistry, biology, and anthropology.

We will find that two themes arise from this historical context. One is that evolution, natural selection, and coevolutionary adaptation runs the show. The sun is the biggest thing to keep in mind for life on earth and our ancestors while doing a great deal right (correctly) and giving us this time on this earth, they, collectively also did many things wrong and squandered our inheritance. Changing our behaviors will change our world.

Simply put, bioregional permaculture is the process by which we do this, by tapping into solar income, coevolutionary adaptive potential, and beginning to rebuild a prosperous inheritance for future generations.

Bioregions are geological and geographical assemblages of distinct character that define the ecological framework of all plant and animal communities on the planet. The early science behind the delineation and discernment of bioregions comes

from the early 1900s Isaiah Bowman wrote a book called Forest Physiography of North America. Physiography is the combination of physical geology and geography. Physiographic provinces are areas that share similar geology, hydrology, soil,

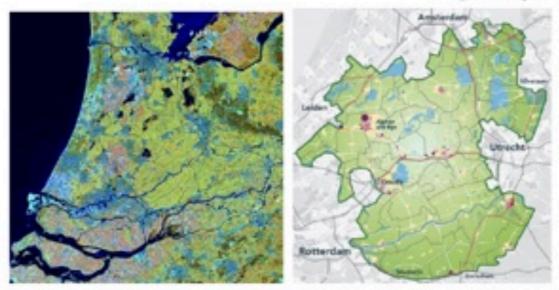
plant and animal communities. J Russell Smith, a professor of geography in the 1920s, wrote a book called Tree Crops expanding Bowmans' work into the field that today we call Agroforestry. Trees are our allies and trees that provide multiple economic returns, food for us, for livestock, building materials, medicine and diverse beneficial ecofunctions are particularly important to rebuilding a regional economy. What Smith was outlining in Tree Crops was nothing less than a long term response to patterns of history in particular the last 10,000 years of global scale deforestation by human agency. The subtitle of Tree Crops is "A Permanent Agriculture." Bill Mollison and David Holmgren expanded on the work of Smith and Percival Alfred Yeoman, a hydro-engineer who redesigned farms to be terraformed with large machinery and planted with tree crops for maximum water retention in semi-arid landscapes. Mollison and Holmgren coined the contraction of Permanent Agriculture, calling it Permaculture.

What made Smith, Yeoman, Mollison, and Holmgren's agriculture permanent is

that unlike irrigated cereal grain-based agriculture, their systems are designed to adapt to the local ecological realities and landscapes and to look like a forest and give yields like a garden created by people. Permaculture does not attempt to do away with grains and vegetables, it is geared towards diversifying how we farm and garden to borrow more from undisturbed local ecologies and use more perennials, trees, and shrubs and integrate animals.

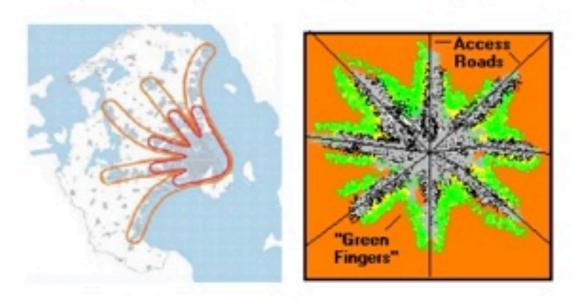
The roots of this movement to address long-term problems in human mismanagement of landscapes begin with Smith and Yeoman and are informed by what Aldo Leopold calls a land ethic. Permaculture coming out of the early 70s includes a strong ethical imperative to take responsibility for our actions and for providing future generations with a better quality of life. Permaculture gives an ethical underpinning to the reason we need to take on this work of healing the wounds and correcting the correctible mistakes that previous generations have made. WC Lowdermilk created an 11th

We need to retrofit the industrial infrastructure to be more natural and more regionally self reliant for energy and food needs.



Denmark - Copenhagen

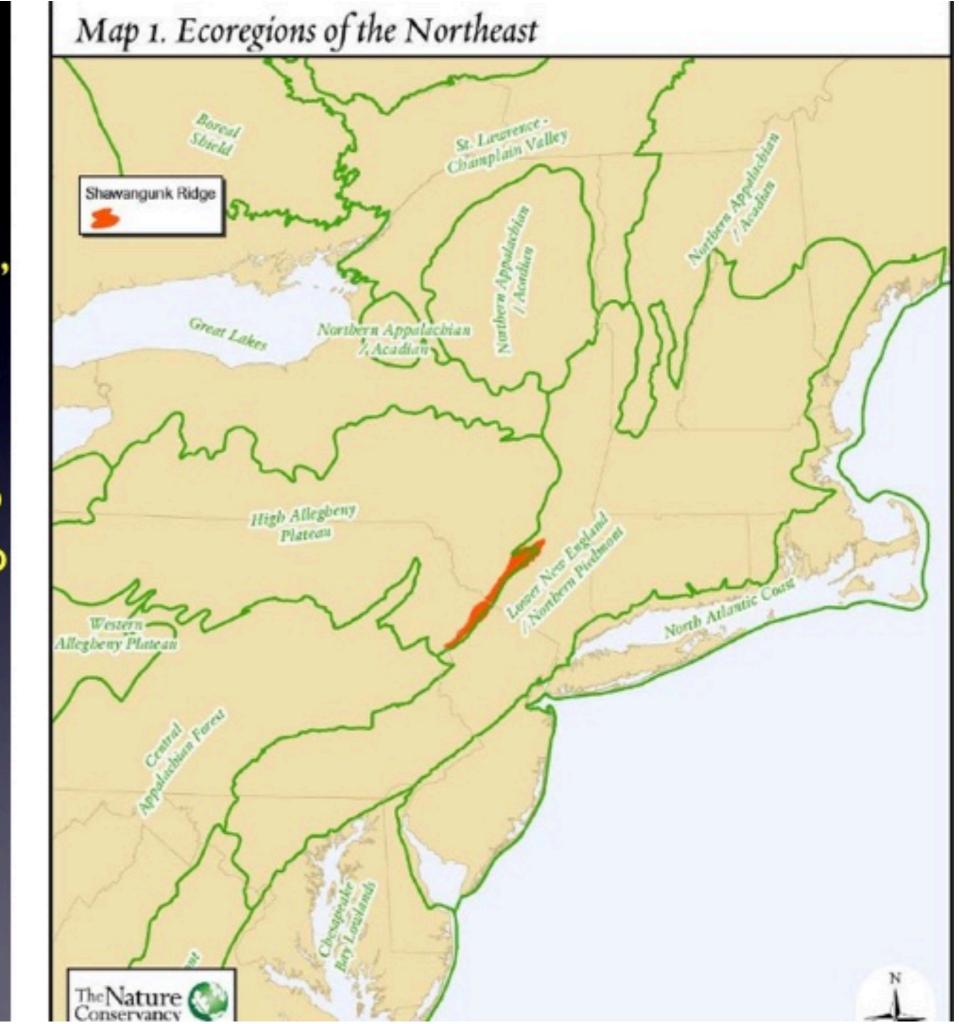
The five finger plan or starfish model was drawn up in 1947 to facilitate growth along radial suburban train lines travelling into central Copenhagen, "the palm of the hand", where growth had historically been concentric. Large service and production centres were planned in the junctions between the "fingers", with housing built around suburban railway stations, whilst the rest of the space between the fingers was to remain undeveloped in favour of green space.



Sweden - Stockholm

The urban settlement has mainly been developed in a star-like pattern. From the beginning the undeveloped wedges to a great extent were royal parks, land belonging to noble families, or military exercise fields. The star-shaped urban development has formed a sort of structure with green wedges between the settlement and traffic zones providing good access to public transport as well as green areas.

Each region will have unique crops, buildings and energy systems that are designed and engineered to be well adapted to each geographic area of the country.

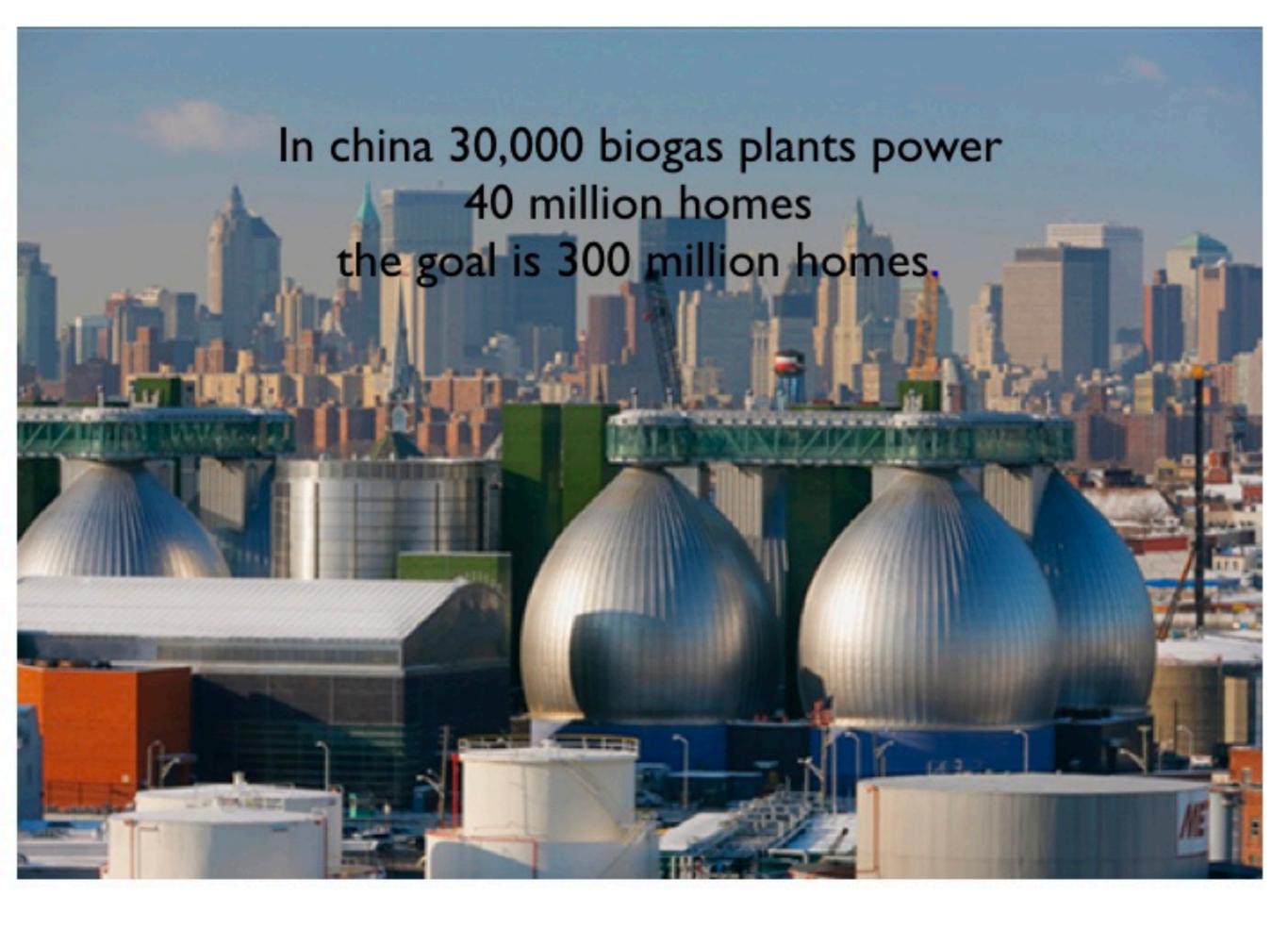


In China over 600,000 people work building solar thermal units. 1/3 of all homes in China get all their hot water from solar thermal.More power then 40 nuclear power plants!















What we do

- *Find good properties and regions for achieving the goal we have in mind of creating prosperous ecological economies.
- Create the Permaculture site design and management handbooks for the start-up phase of all the properties and communities that are part of the project.
- Bring a team of experienced people to implement and train participants.
- Outreach in the area to build networks and alliances.
- Develop crop selections, products, services and educational offerings for each project.
- Creating closed loop renewable energy systems
- Converting wastes into resources
- Integrating all projects with the local community and endemic ecologies

NORTHEAST REGENERATIVE FARMLAND

Buys and Converts Conventional Farmland to Organic, Sustainable Farmland for Long-Term Cash Flow, Capital Appreciation, Environmental & Social Benefit

Our investors are building healthy, local food systems, creating meaningful work for the next generation and remediating climate change



- Manage and Improve Agricultural Properties for Conscientious Investors
 - √ An inflation-protected asset with enduring value and beneficial impacts
- Converting to <u>regenerative methods</u> increases cash flow
- Additionally, it provides numerous social, cultural & environmental benefits
- ➤ We expect to buy 1000 acres worth \$4,000,000 in ...
 - √ 150 acres already under chemical free, integrative permaculture production
 - √ An additional 3000 acres in 2018
 - √ An additional 6,000 acres in 2019

INVESTING IN PERSONAL AND PLANETARY WELLBEING

Positive returns to multiple sources of capital on a pathway to a resilient and thriving future



- We acquire undervalued conventional farm properties in growth areas
 - √ Utilize pre-infrastructure for commercial food production
- > Convert to organic, regenerative (beyond sustainable), holistic managemen
 - ✓ Increased yield and asset value
 - √ Long term environmental benefits
- Supporting regional economic transition and revitalization
 - √ Job creation and vocational training
 - √ Improving quality of life and desirability
- > Regional Permaculture approach builds ecological & economic resilience

Integrative Permaculture

lives, healthy food & a healthy planet

Building healthy soil to encourage healthy

Food security in the event of price rises or production shortages

 Our investors earn a return, build thriving local economies with social and environmental enterprise while increasing food security

Economy Education
Enterprise
Environment

DEMAND FOR ORGANIC & LOCAL FOOD INCREASING



Organic & Local Foods are the Fastest Growing Segment of the Food Market, Growing at Over 15% Annually

- Nationally, sales of "local foods "grew from \$4.8 billion in 2008 to \$7 billion in 2011
- ➤ The organic food market has grown from \$3.7 billion in 1997 to nearly \$29 billion in 2010*
- In 2010 Glynwood Farms estimated that the potential demand for fresh local produce in NYC alone was more than \$860 million, dramatically higher than the level of supply coming from tri-state area of only \$149 million
- Increasing concern with the health risks of conventional food and food security contribute to the value of local & organic food

Source: Organic Trade Association 2011 Organic Survey

Economy Education Enterprise Environment

The Hudson River Watershed YESSENT CONNECTICUT PEROSYEDANA 6,896,800 +

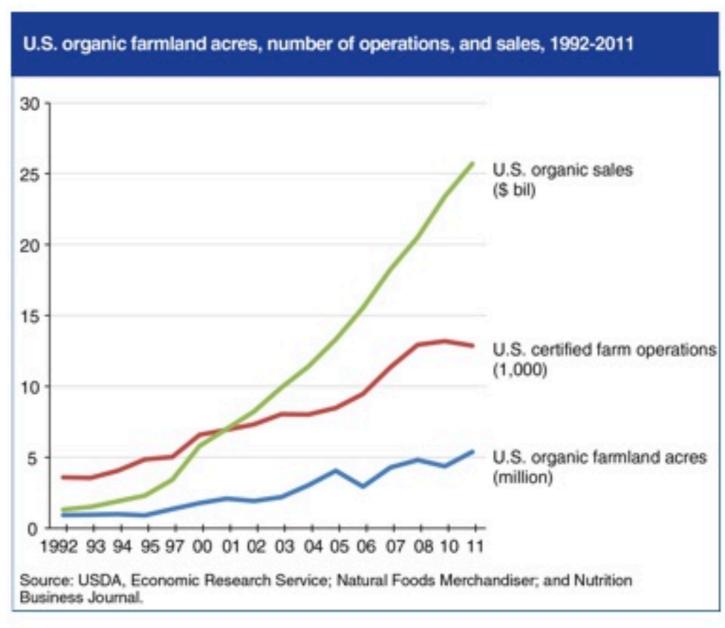




ORGANIC CROPLAND IN SHORT SUPPLY

Supply Shortages & Rising Demand Ensures Price Premiums For Organic Food and Land

- Demand for organic food far exceeds supply, resulting in price premiums of 50% to 200%
- Sustainable farming practices improve profitability by reducing input costs and production volatility
- Undertaking a 3 year conversion process to organic certification returns tremendous long term benefit in several areas



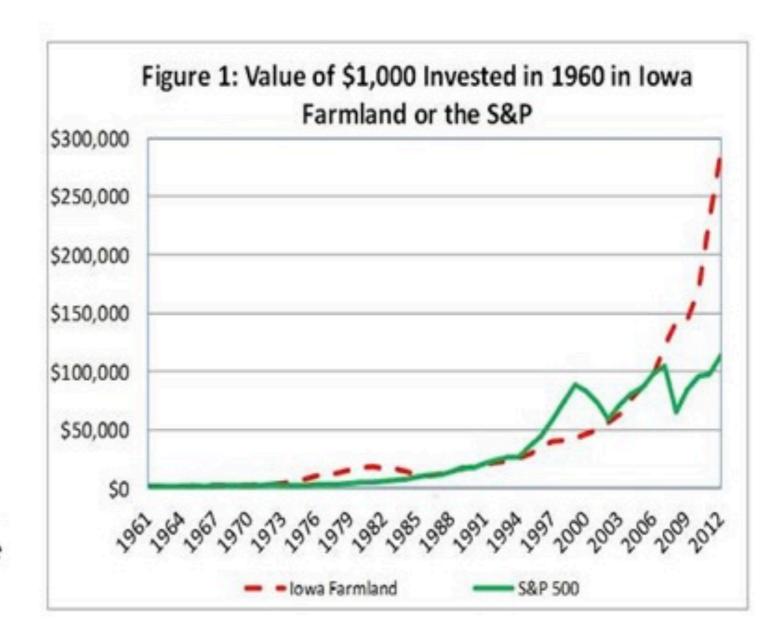
ORGANIC LAND IS A SECURE INVESTMENT

Farmland is a Stable, High Performing, Recession Proof Asset in Limited Supply and Increasingly Sought After

As an investment, farm property values have consistently risen while outperforming traditional asset classes

Arable land is in limited supply, with much of it currently subject to declines through increasing extremes of weather and climate

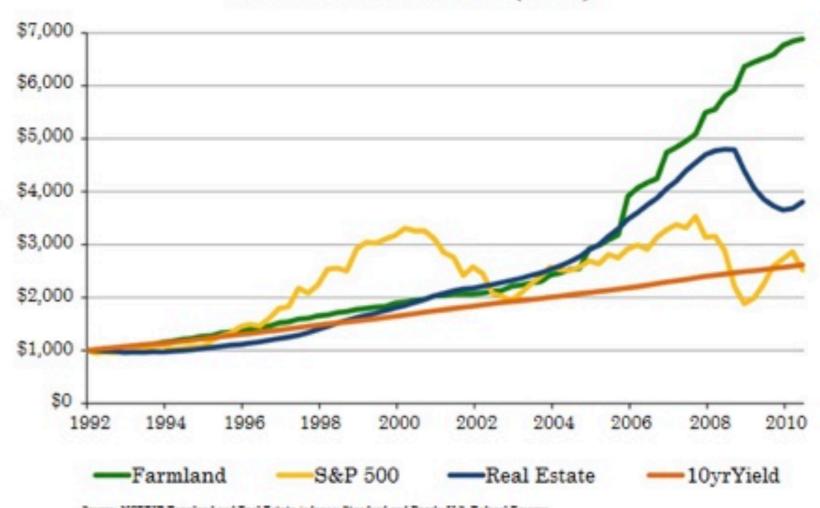
Many small, conventional family farms are forced to sale due to competition and pressure from large scale industrial monopoly agriculture



Historically farmland has delivered positive returns over long time periods

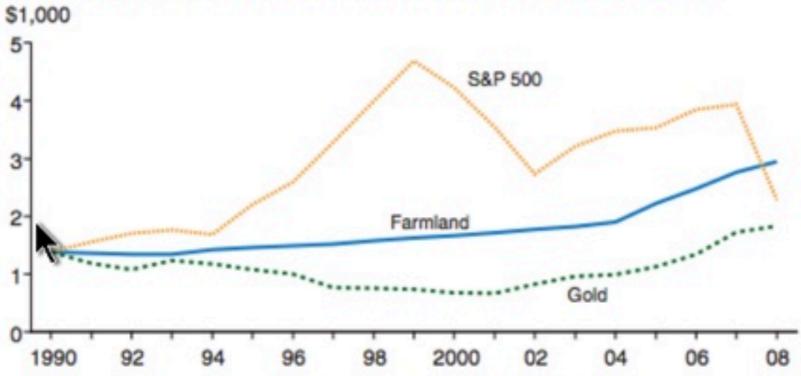
- Conventional farmland delivers attractive returns over the long run
- The NCREIF Farmland Index Generated 14.8% IRR Since 1992
- Consistent and increasing demand for food, fiber and biofuels makes farmland an attractive buy-and-hold investment

GROWTH OF IN ITIAL \$1000 (VAMI)



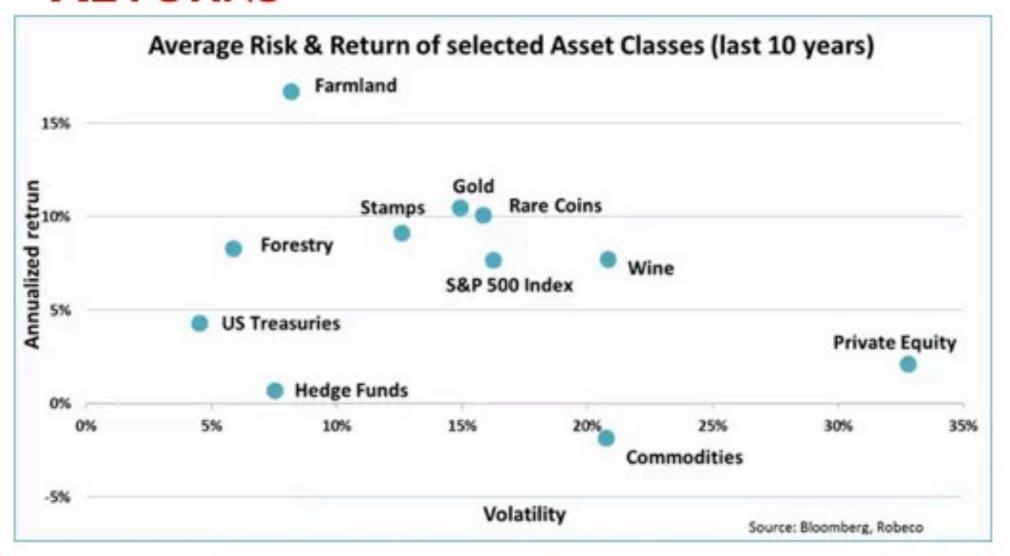
Historically farmland has delivered positive returns over long time periods

Returns to farm real estate versus stocks and bonds, 1990-2008



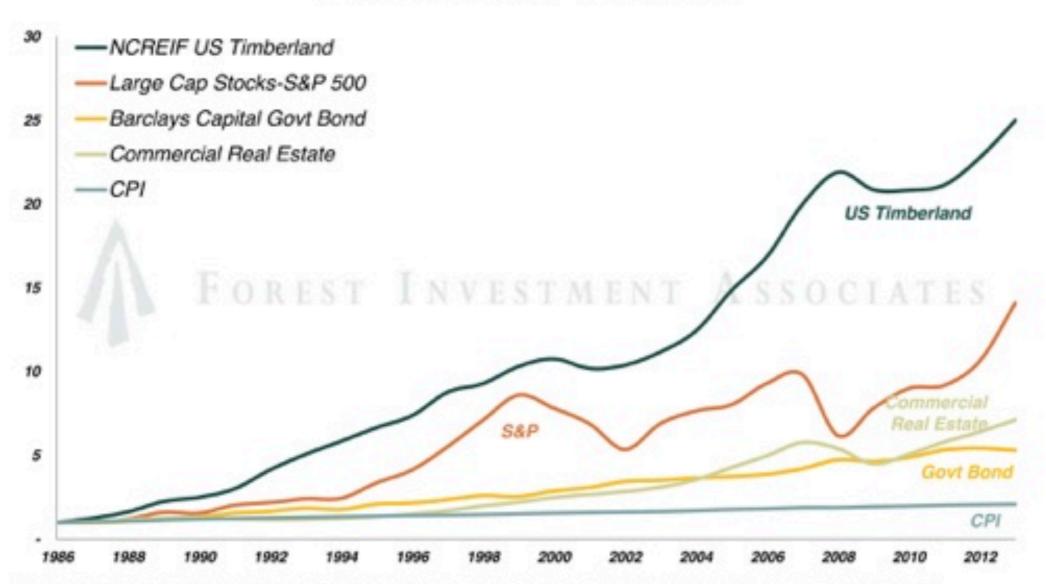
Sources: Farmland returns are derived from the USDA, National Agricultural Statistics Service June Area Survey estimates of average value per acre of all farms and buildings in the continental United States. The S&P 500 and gold prices are based on end-of-year settlement prices.

Farmland delivers significant positive return value with low volatility



Forest land is a lesser known high yield asset

Value of One USD (\$) Invested in 1987 (Since NCREIF Inception)



Sources: NCREF, Abotton: S&P 500 Composite w' dividends reinwested; one-bond portfolio compiled from Walf Street Journal data per fishotson; CPI-All Urban Consumers, not seasonally adjusted.

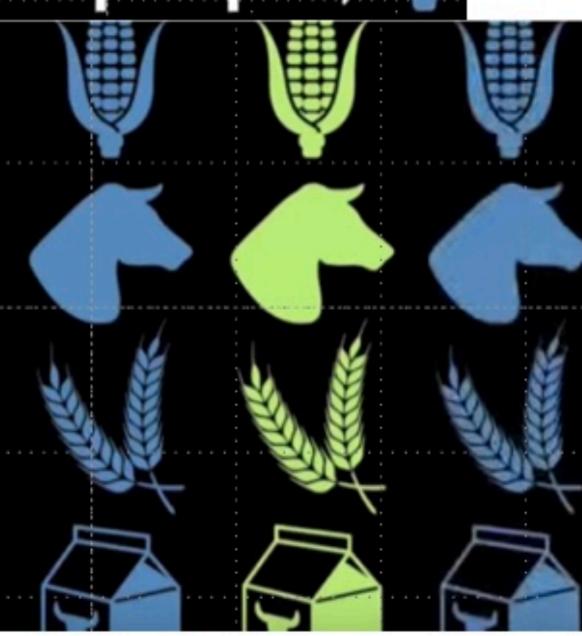
This graph illustrates the performance of various asset classes over time as reflected by widely-accepted market indices. It is not intended to be a representation of FIA's performance or the performance of any account managed by FIA.



We'll need to DOUBLE,

maybe even **TRIPLE**,

global food production.



What is Socially Responsible Investing (SRI)

Simply put, impact investing is the deployment of capital with an expectation of financial return, where the success of the investment is also contingent upon achieving a stated social or environmental goal. It is both philanthropy & investment

A central theme underpinning impact investing: the creation of economic value and social value are not mutually exclusive, and can actually be complementary

SRI investing is very competitive to mainstream investing.

- Perhaps the most cited source is the <u>Domini 400</u> <u>Social Index</u>, which is a market cap weighted stock index of 400 public companies that meet varying social and environmental criteria..
- The DS400 provides a good sample of long-term SRI performance, having been created in 1990
- ➤ Its average annual return has been 11.01%
- The S&P 500 index had an average annual return of 10.57%.

Growing Level of Investment Vehicles & \$\$

- In response to investor demand -- from <u>baby</u> <u>boomers</u> as well as <u>younger generations</u>-we've seen a boom of socially responsible investment funds
- ➤ In 1995, there were only 55 mutual funds engaged in SRI, totaling \$12 billion in assets
- By 2012, there were 493, with assets of a whopping \$569 billion

Becoming Mainstream

- Socially responsible investing (SRI) is becoming mainstream according to a study on the competitive advantage of green business practices
- ➤ A survey of 1,300 green businesses, by LOHAS (Lifestyles of Health and Sustainability) reveals that, over the last decade(2000-2010), the assets of SRI investment portfolios grew an impressive 32 % from \$2.3 trillion to \$3.07 trillion
- ➤ Assets in investments overall grew just 27%

Financeable interventions can satisfy a range of objectives

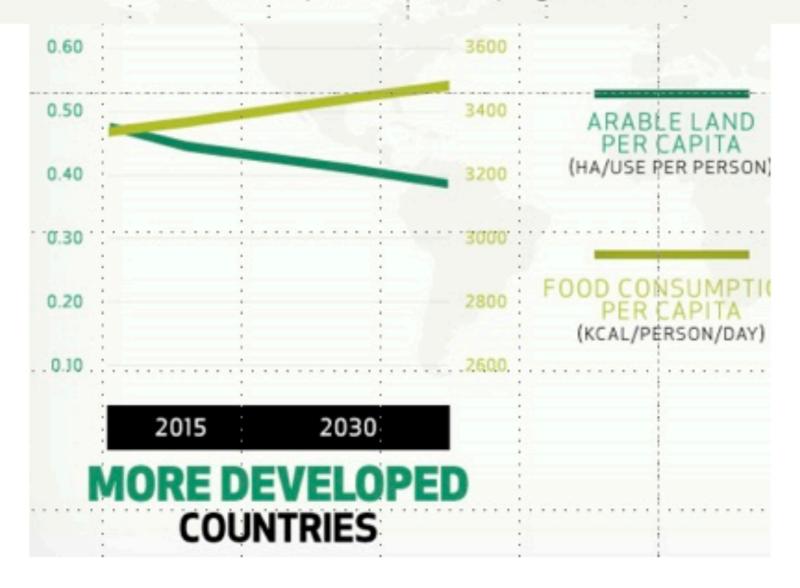
- Mitigating climate change
- > Strengthening sustainable agricultural communities
- Good jobs for young adults
- Providing better health care
- Decreasing income disparity
- Rebuilding Soil
- Clean, Abundant Water
- Social Justice
- > Immigration
- World Peace

Arable land per person is <u>decreasing</u> at the same time that <u>Food</u> <u>consumption</u> per person is <u>increasing</u> and <u>Population</u> is <u>growing</u>

LAND USE EFFICIENCY

Through 2030, agriculture's land use efficiency will need to improve.

While per capita availability of land continues to drop, per capita consumption rises in both developed and developing countries.



IMPACTS OF CLIMATE CHANGE

By 2030, nine out of 10 of the major crops will experience reduced or stagnant growth rates, while average prices will increase dramatically as a result, at least in part, due to climate change.



MAIZE



90% PRICE



RICE



89% PRICE



WHEAT



75% PRICE





PRICE

Given the drastic reduction in the amount of farmland per person, the value of farmland in general and organic farmland, in particular is a valuable long-term asset.

However less than \$60 million of the \$100's of billions of dollars invested in farmland has flowed into developing organic farmland in the United States, and none in the water-rich northeast.

This situation presents a unique opportunity for social benefit, economic return, and environmental health.

This is why we channeling funds into generating additional organic farmland, is both a good idea and the first in the water rich northeastern U.S.

The attractiveness of farmland as an investment is borne out by the flow of hundreds of billions of dollars into conventional farmland over the last six years.

Major investors are in the game. TIAA-CREF, for example, did not own a single farm before 2007. Today it owns over 500, the biggest investment platform for conventional farmland in the world. "When TIAA-CREF entered the market, it was a signal to everyone that institutional investment in agriculture had entered a new and more aggressive phase."

In a short time, obscured from public view, the flow of private capital into farmland and agriculture has grown dramatically. An independent organization known for its research and analysis of global agricultural trends, the Oakland Institute, in a 2014 report asserted that farmland is "an exceptionally safe place to stash capital...it is 'like gold with yield."

"Farmland is a reassuringly tangible commodity that offers the opportunity for solid if not excellent returns. Historically, it holds its value very well against inflation and its returns are un-correlated with other asset classes - meaning that its profits are relatively well-insulated against shocks from other parts of the economy."

(See : Down on the Farm Wall Street: American's New Farmer, p. 4, Oakland Institute, 2014)

The Initial Effort to Convert Conventional Farmland to Organic Farmland

Iroquois, the first iteration of an "organic" farmland fund started operations in 2007. Their focus is:

- To keep young family farmers on the farm, or
 - √ to help aspiring young farmers secure land to farm over the long term.
- To purchase farmland and lease it back to young farmers.
- To help those farmers convert the land to organic

To date they have raised approximately \$12 million and purchased 1750 acres of land primarily in the Midwest.

(See <u>iroquoisvalleyfarms.com/)</u>

The Second Effort to Convert Conventional Farmland to Organic Farmland

Began in 2010. This model includes:

- Purchasing strategically located conventional farms;
- Organizing a land remediation plan for each farm;
- Integrating high value meat production as part of the land remediation program;
- Qualifying for organic certification within three years;
- Adding organic vegetable production for sale to urban markets when certified organic;
- Using variable leases that increase profits to the fund as the farmers' profits grow.

To date Farmland LP has raised approximately \$50 million and purchased 6750 acres of land in California, Oregon, and Washington. It projects a return to investors in five years

(See www.farmlandlp.com)

The next steps to healthy land, healthy food & profitable enterprise

- Making use of the abundant water resources in the northeast
- Integrating Permaculture and related techniques into the land development plan, including
 - √ Using land forms and gravity for water management and more productive cultivation
 - √ Working with water to store it, slow it, spread it and sink it
 - √ Earthworks and Gravity fed water systems
 - √ Food Forests
 - √ Integrated Renewable Energy
- Using soil enhancement techniques, including:
 - √ Bio-dynamic approaches to integrating animal and plant ecologies;
 - √ Soil re-mineralization
- Agro-forestry
- Holistic Land Management
- Hoop house to extend the growing season and yield
- Solar dryers and passive cooling preserve and extend harvest value
- Large scale composting to enrich the soil (eventually an independent profit making enterprise)

Our enterprise ecology works to provide meaningful employment by developing cooperative enterprises that rebuild the local food economy across the entire supply chain, from soil to table. Only a small percentage of income in the food system is captured at the farm gate. While the premium for organic food creates a higher income level for the farmer, by entering the food system at multiple levels profitability can be increased even more

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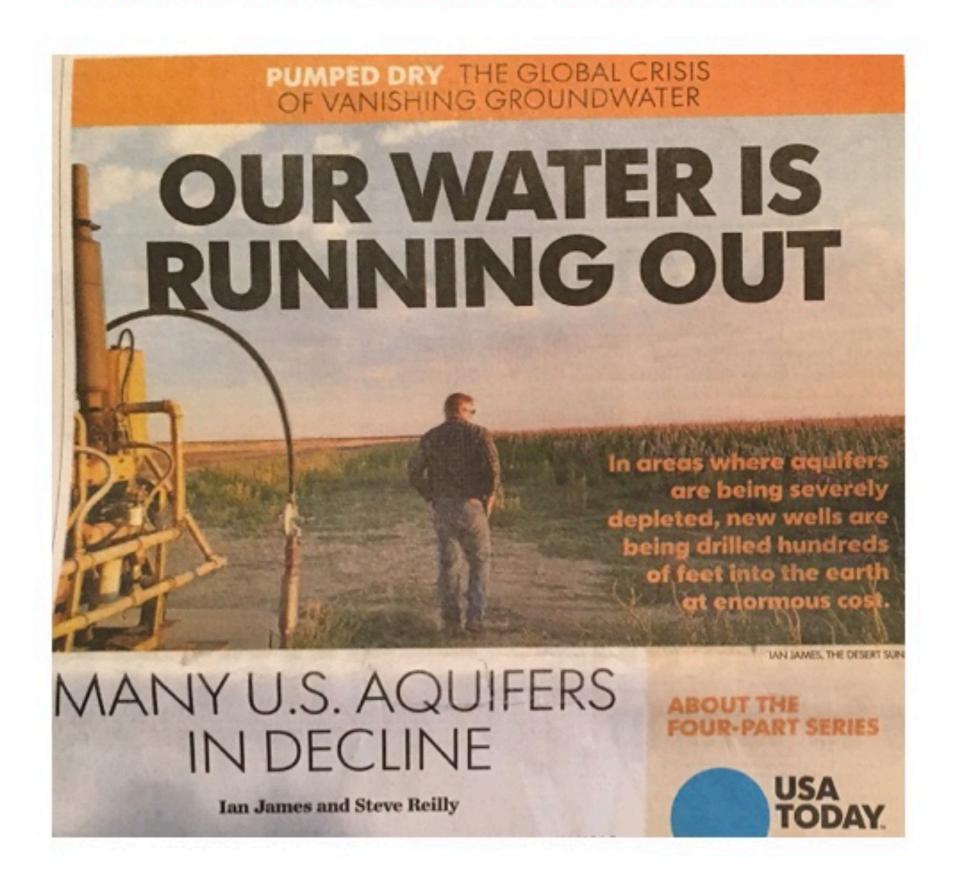




Combining livestock with nut trees in restored ecosystems.

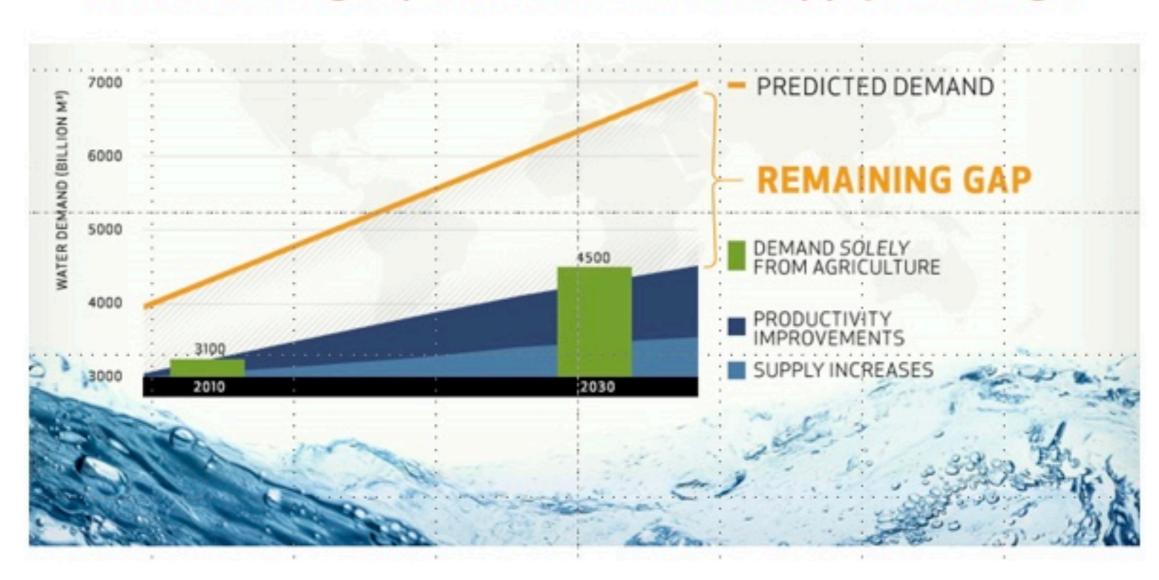


Water shortages and droughts in the southeastern and mid western U.S. increases the value in Northeast Farming



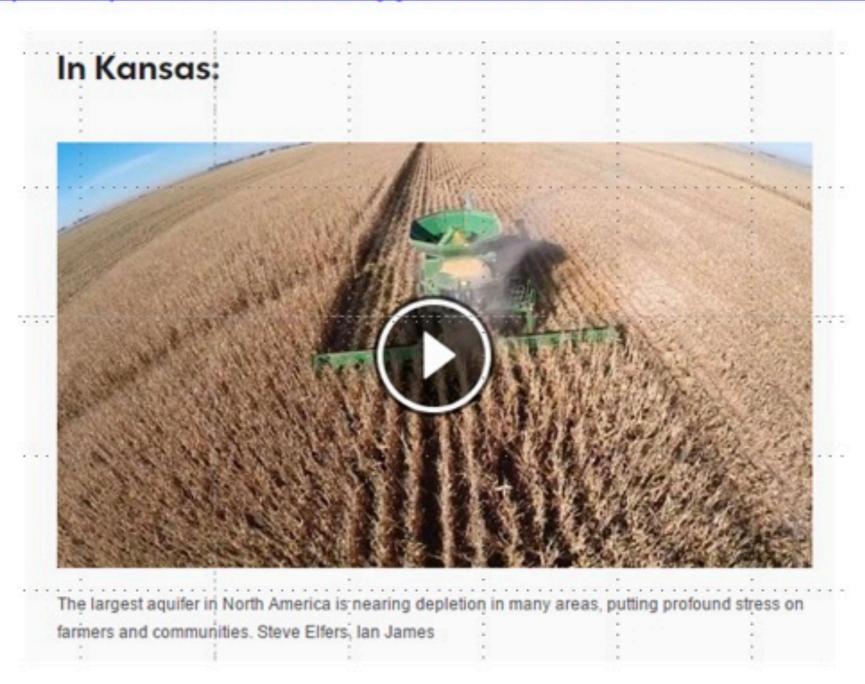


By 2030 water demand will increase more than 50% creating a potential serious supply shortage



North America's largest aquifer is running dry, putting stress on agriculture across the midwest

http://www.usatoday.com/story/news/2015/12/10/vanishing-groundwater-videos-california-kansas-india-morocco/77093846/



How land is managed has dramatic impact on water & fertility

This is the SAME LAND before and after the introduction of regenerative land management practices







- Same area
- Same rainfall
- Same soils
- Same plant species
- Same season (pictures taken on the same day)

- The area above actually has more livestock
- It also has far more wildlife, including buffalo, elephant, and lion
- The only difference is management

Livestock in these areas get managed to:

- Increase the land's ability to absorb and hold water
- Build new soil
- Help new plants start
- Increase forage production
- Increase biodiversity
- Build a healthier landscape













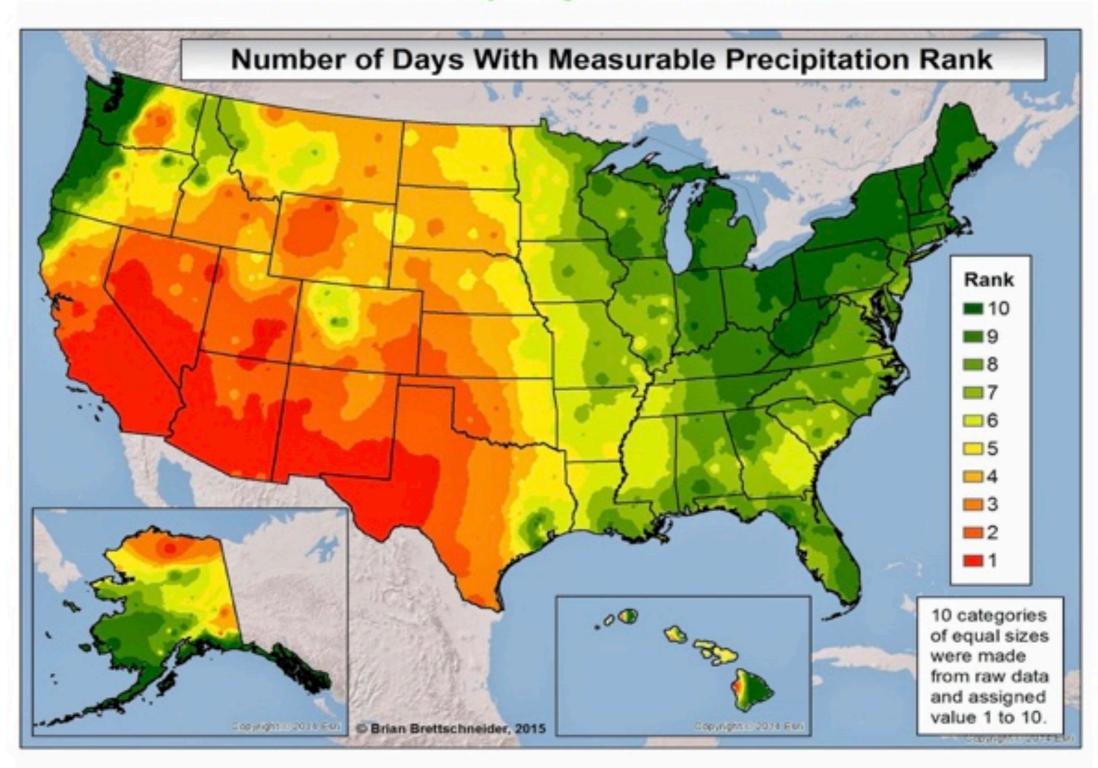
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Regional Advantage - Northeast US

- Favorable climate outlook and ecological recovery
 - √ moderate increase in rainfall and temperature overall
 - √ massive forest recovery and conservation in last 100 years
- > Near optimal historic settlement patterns tied to the landscape
 - √ small farms and open space clustered around village centers
 - √ hill and valley topography suited to compact development
- Large, stable, affluent, dense, and progressive population
- > Strong and growing local foods movement and food connoisseurs
 - √ Hudson Valley, Berkshires, and southern Vermont
 - √ Substantial flow of tourist traffic in three seasons
- Amenable growing conditions for wide range of temperate crops
- Ample raw materials and skilled workers; low competition

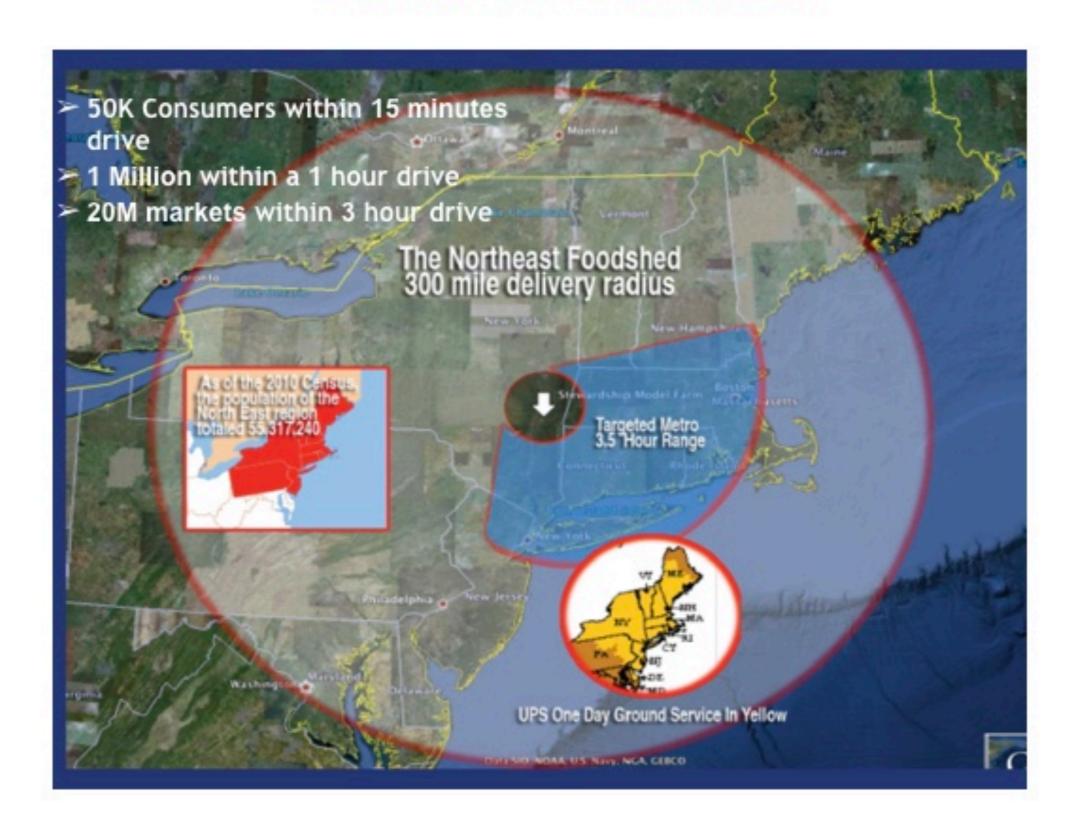
US Geographic Climate Overview

Northeast US best outlook for agricultural climate and precipitation Northwest is far more seasonally weighted winter-summer



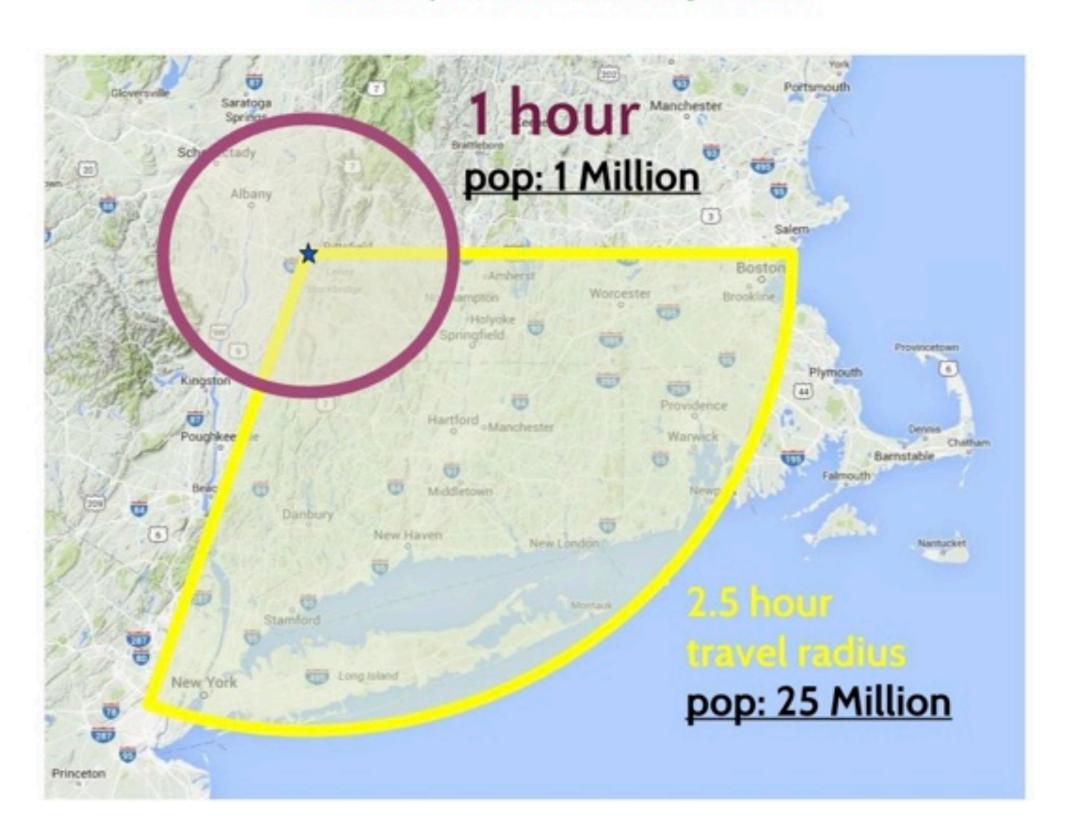
SUBSTANTIAL MARKET OPPORTUNITIES

Dense Population within Driving Distance



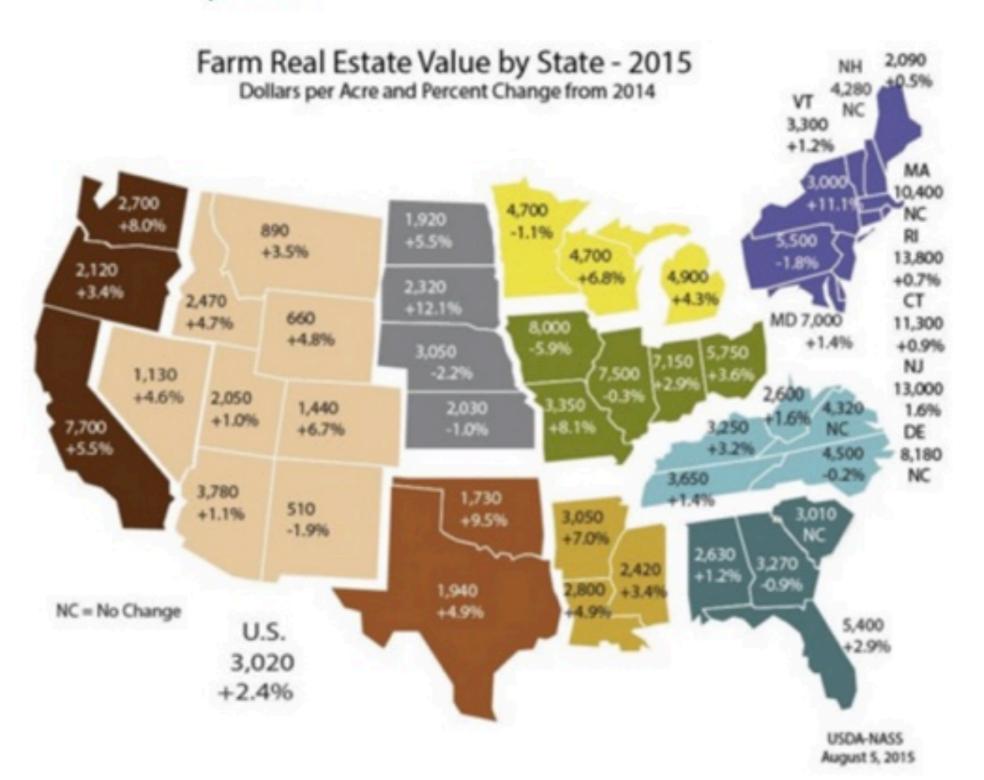
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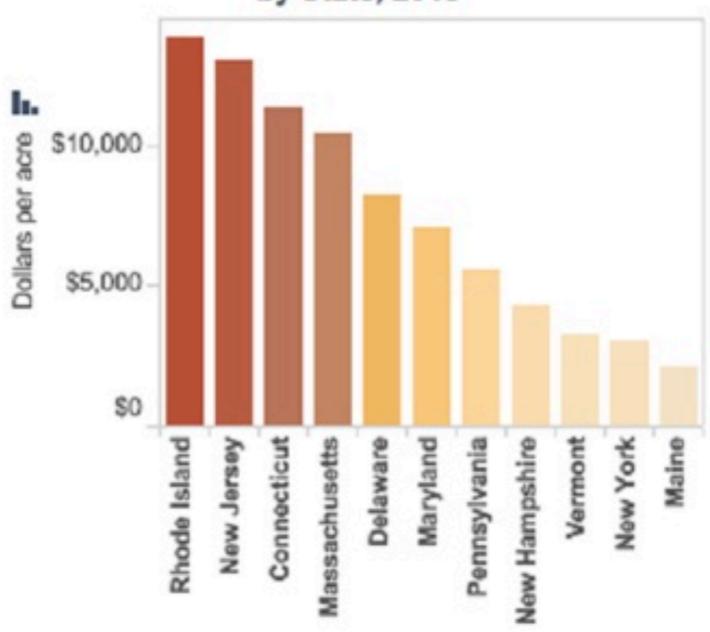


LOWER PRICE PER ACRE IN NORTHEAST

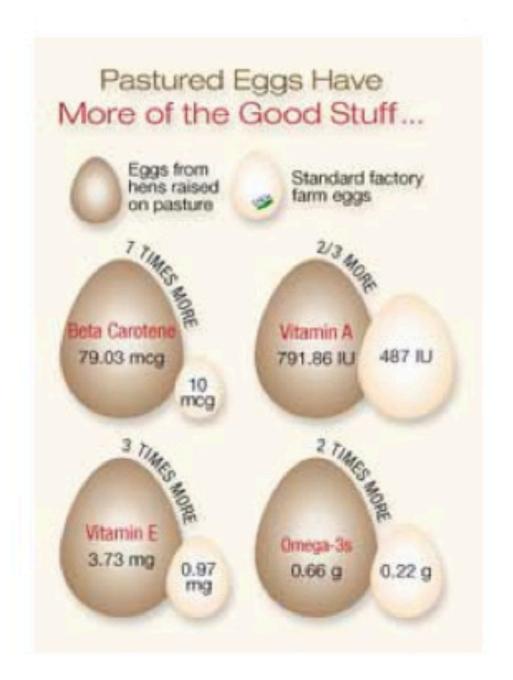
Substantial farmland acreage lays fallow

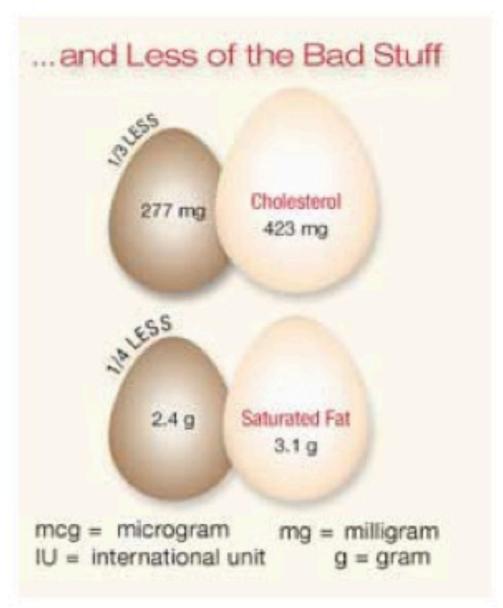


Farm real estate* values per acre by State, 2015



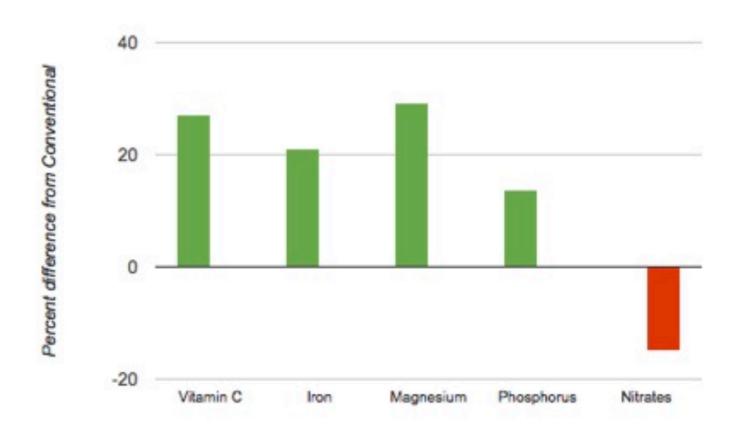
Free Range Eggs Nutrient Comparison





^{*} from a Mother Earth News study and article with USDA data

Nutritional Difference of Organic Vegetables

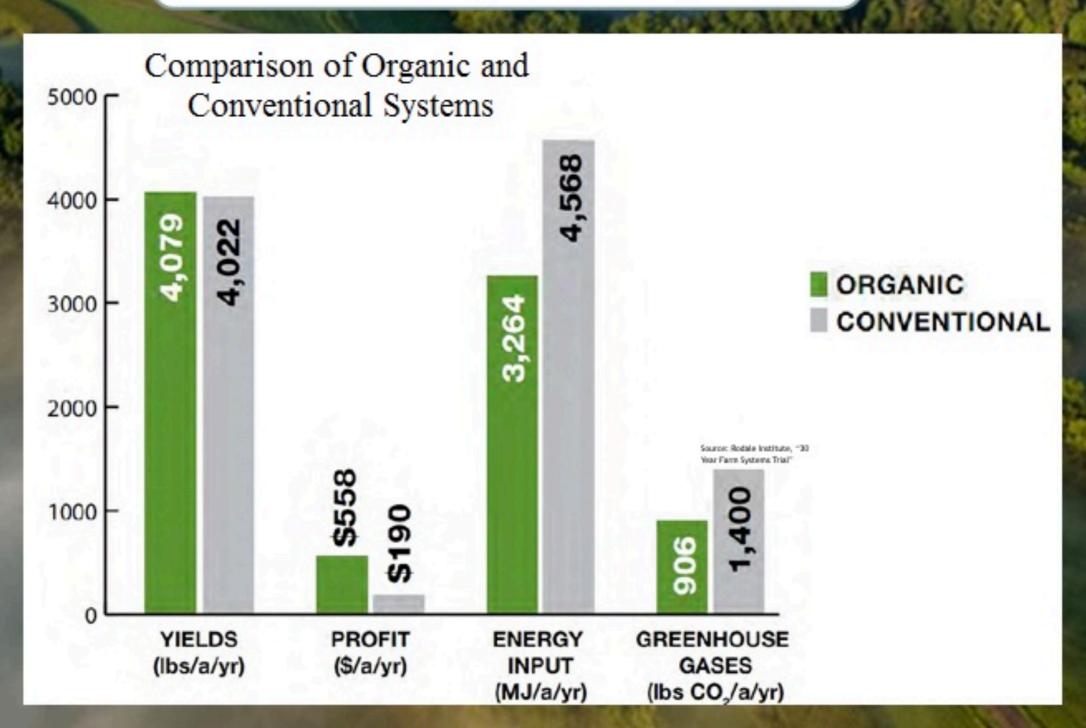


Findings from a meta analysis of over 40 studies on dozens of annual crops

^{*} Nitrates are toxic byproducts of synthetic fertilizer usage



Input costs for chemical-based farming have tripled over last 20 years

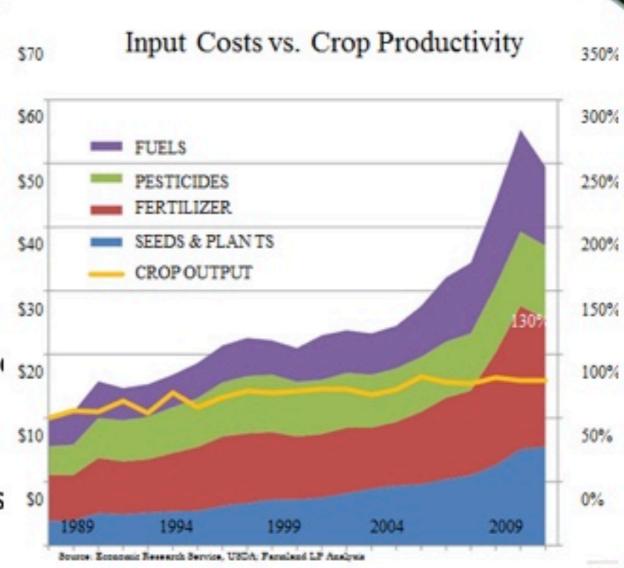


METHODS REDUCE COSTS

SUSTAINABLE Input Costs for chemical-dependent agriculture have increased 6x more than crop gains over last 20 years

Crop output increased 30% over the last 20 years Input Costs (excluding labor, equipment, etc.) have tripled during that same period Recently, Monsanto's Roundup Ready GM soybean seeds increased from \$35 to \$50/ bag while Roundup herbici \$20 increased from \$15 to \$50 per gallon

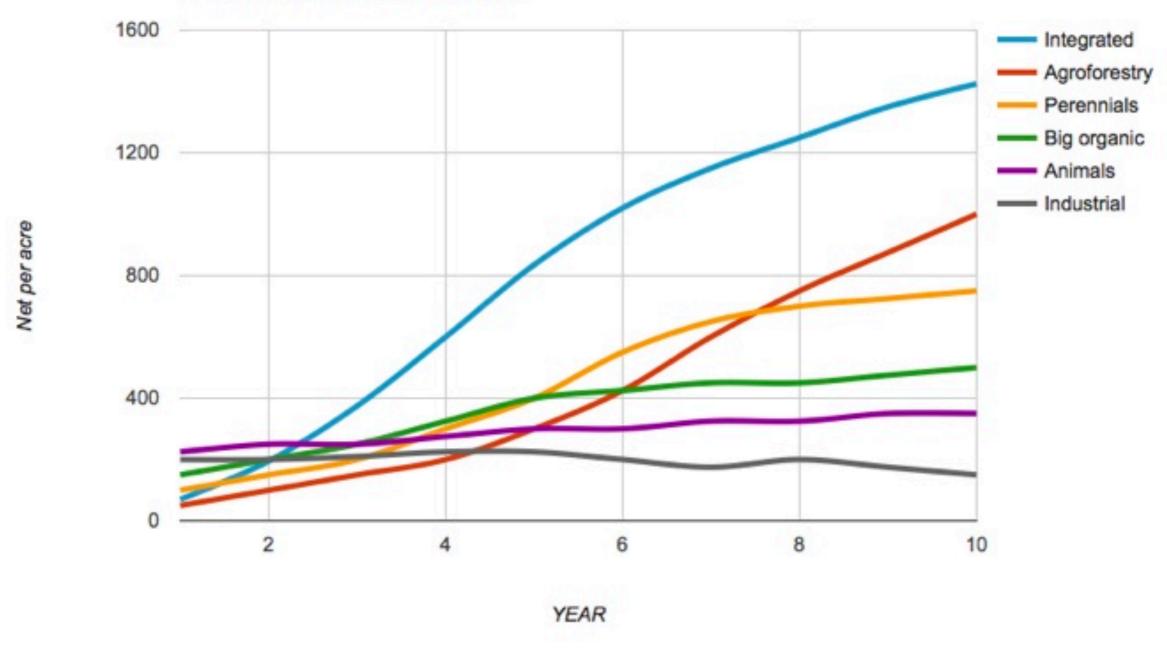
Sustainable agriculture methods 50 reduce expenses and increase profits by 2-3x by lowering pesticides, fertilizer and seed costs



Comparison of Net Yields

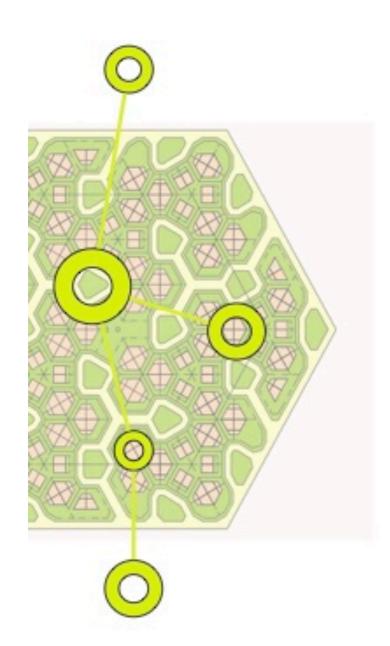
Six different production systems showing wide range of

results
Production Methods Compared



^{*} Projection from USDA and SARE data adapted to NE region

Advantages of Clustering



- Shared facilities and equipment
 - ✓ Benefit from lower costs and improved accessibility
 - ✓ Streamlined infrastructure at each site reduces redundancy
- Joint workforce plus pooled skills and knowledge
- Shift focus between properties seasonally and year to year
- > Opportunities for product verticals, and waste stream cycling
- > Regional visibility, mutual outreach and promotion
 - ✓ Collaborative branding and promotion for products
 - √ Community support and engagement

Property Selection Criteria

Size and Composition

- 20-500 acres contiguous
- Balance of fields to forests
- Amenable soils
- Low invasive species pressure, including GMO
- Water features: pond, stream, springs, irrigation

Development Potential

- Existing infrastructure
- Permissive zoning
- Adequate utility service
- Amenable neighbors
- Safe and secure locale
- Nearby transportation
- Local economic activity

Location and Setting

- Private yet accessible
- Appealing rural setting
- Limited noise, pollution
- Adjacent to protected natural lands
- Nearby population centers and markets

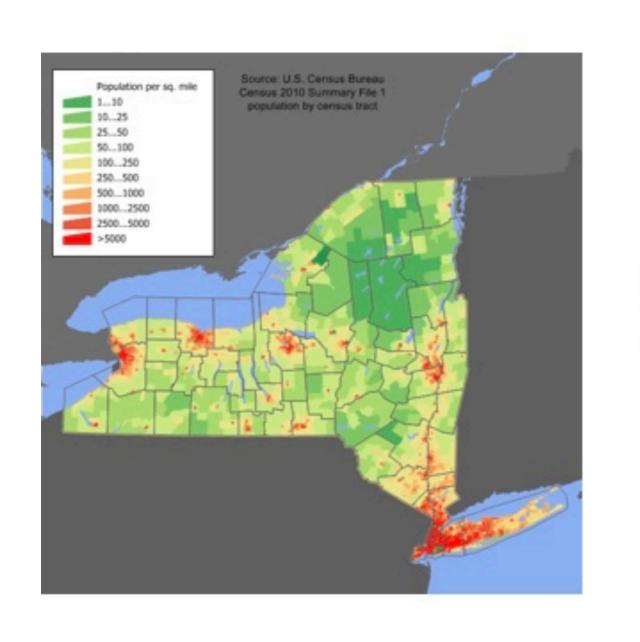
Geographic Features

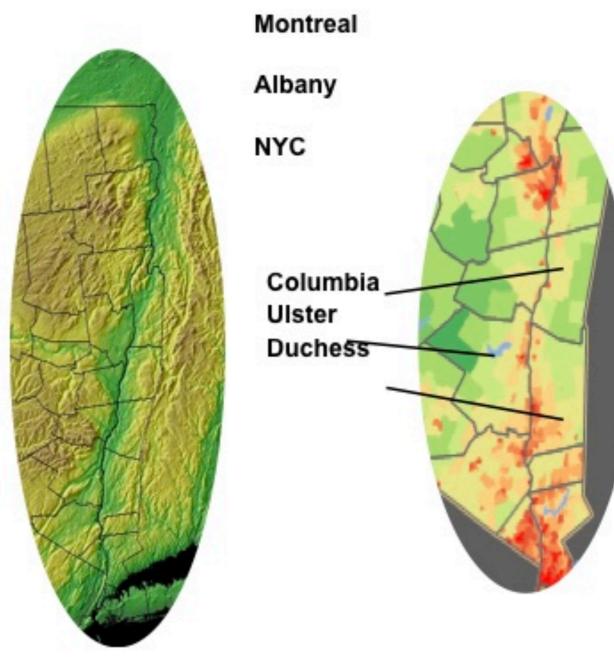
- Low to moderate slopes
- Topographic diversity
- Diverse natural scenery
- Good soil profile
- Good solar exposure
- Beneficial microclimates

Geographic Overview



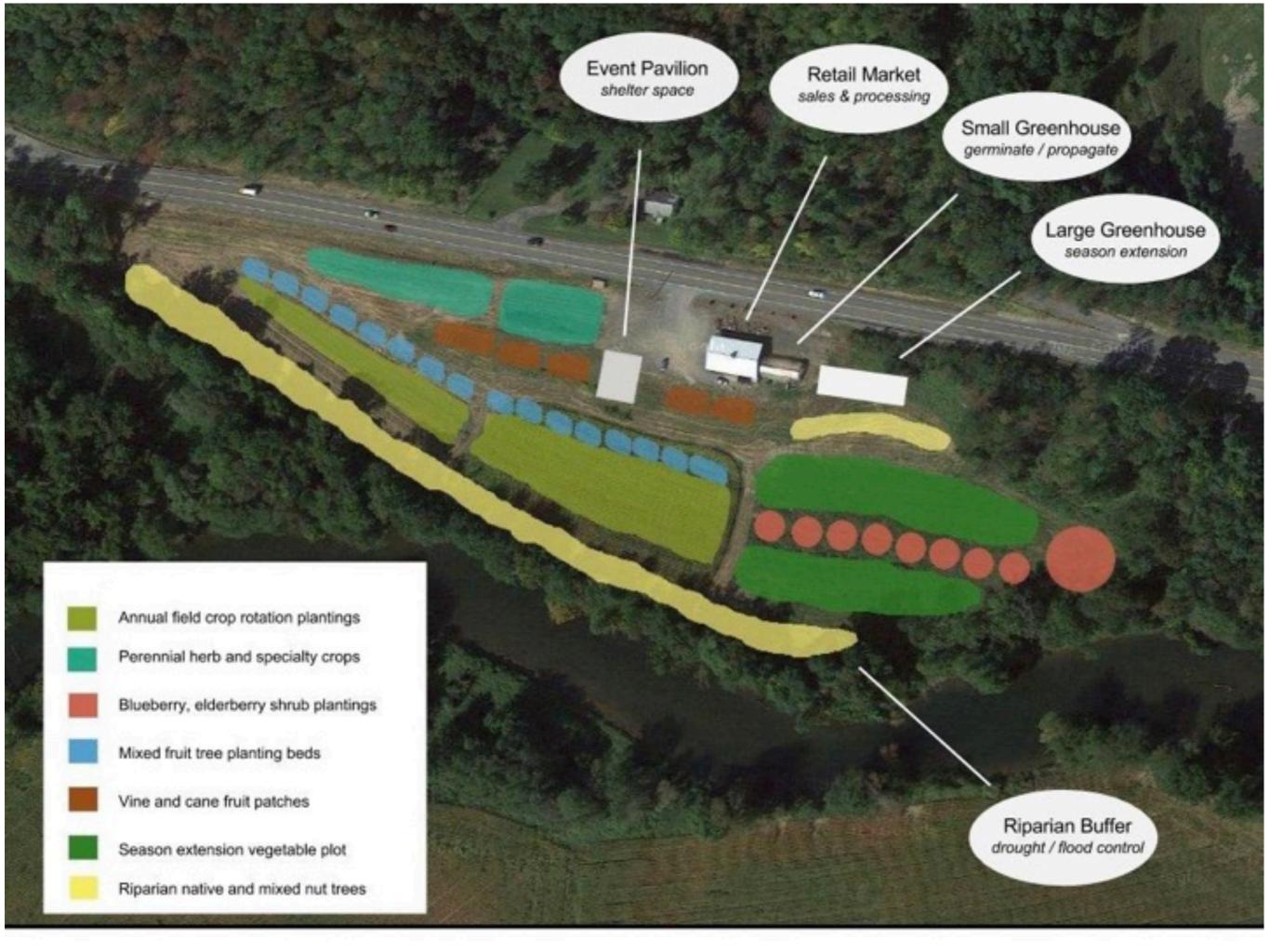
Hudson Valley focus - three counties





Area experiencing well-paced rural revival

- Influx of families, young creatives seeking high quality life in reach of urban centers
- Tourism is strong during three seasons of the year major themed events and curated cultural attractions can be found on almost any summer weekend
- Real estate and rental market strong
 - Buyers seeking out aesthetic eco-friendly properties without sacrificing amenities
- Small businesses based on crafts, local foods and culture thriving
- Local heritage and community fabric palpable
 - Future of modest economic revival & careful conservation of legacy ideals



The Rondout River Cafe & Organic Marketplace: a Community Gathering Place and Sustainability Education Center

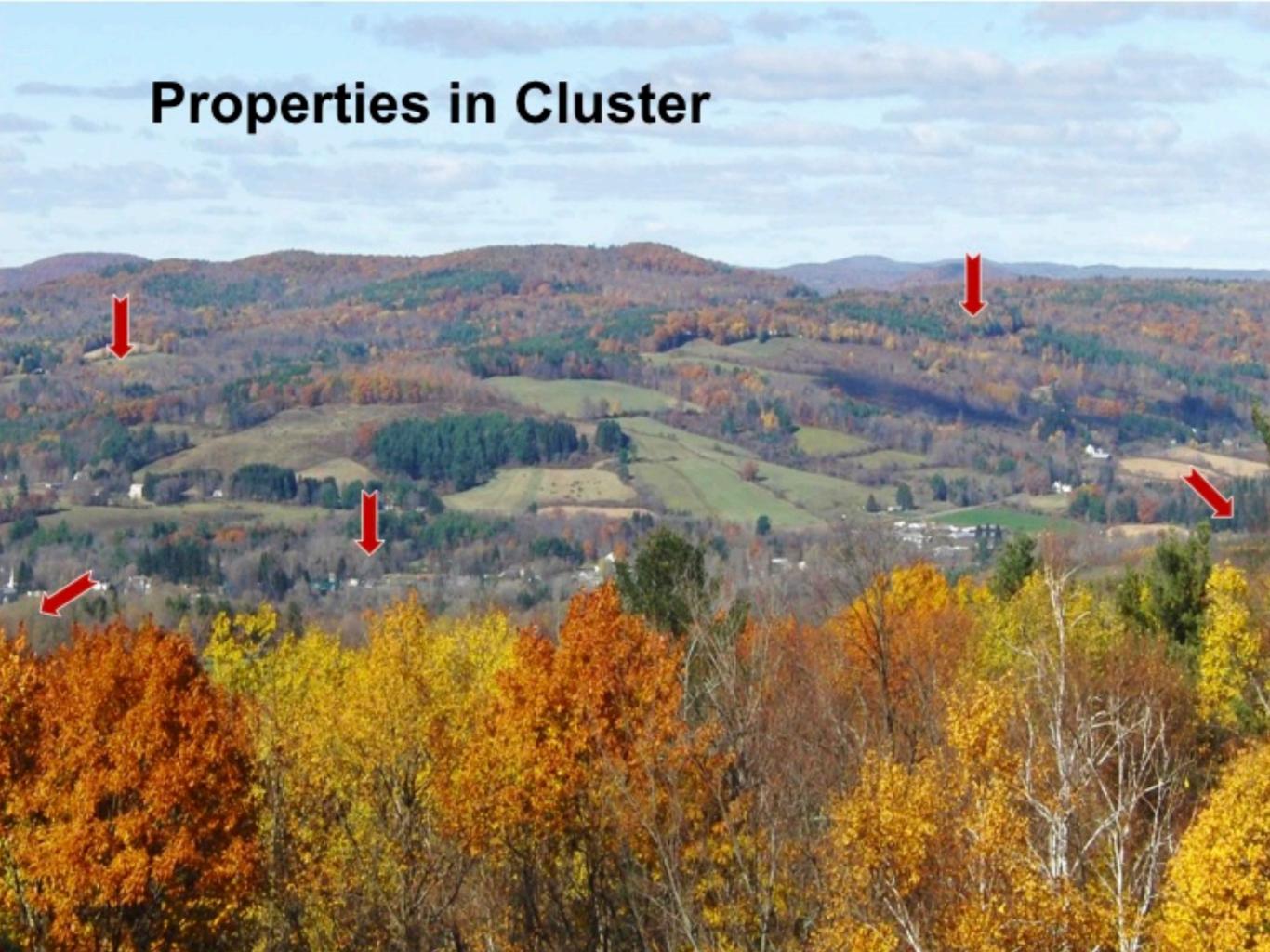
The outgrowth of an Integrative Permaculture perspective that values real food and environmental awareness, the Rondout River Cafe & Organic Marketplace is a unique venue in a highly trafficked area of the southern Hudson River Valley. The area hosts a large number of food conscious local residents and a growing population of New York City weekenders finding a second home. Located between the Rondout Creek and federal highway 209, a well-travelled thoroughfare between Kingston and Ellenville, the 15 acre site is close to New Paltz, Stone Ridge, Rosendale and High Falls, site of a successful community coop.

The area hosts significant populations of urban professionals, well healed boomers approaching retirement and millennial graduates seeking to make a life and a living. With the Hudson River Valley's focus on building a strong local economy, based to no small degree on local and organic food, the opportunity for a community gathering place and single source of nutritious local food is apparent. The area hosts a significant number of community events, local food restaurants and agricultural initiatives, yet remains underserved by informal gathering places where a cup of tea or cappuccino, a gourmet sandwich, home baked breads and pastries, fresh organic produce, or a well prepared take home dinner are readily available.

In addition to offering family friendly environmental education, and modeling how the impact of weather anomalies can be mitigated, the Organic Marketplace will offer a variety of local foods and organic products. Seasonal availability, and a community of local growers will provide high quality, pesticide free, non GMO fruits, vegetables, meat and dairy. A permaculture installation and watershed protection plan will take shape on the 15 acre property over the coming seasons. Greens, berries, nuts, mushrooms, pasture raised eggs and herbs will come from local organic farms as well as directly from the property. Other high quality, nutritionally rich and uncommonly delicious prepared foods, condiments, oils, spices, dried and frozen foods and specialty items will also be available.

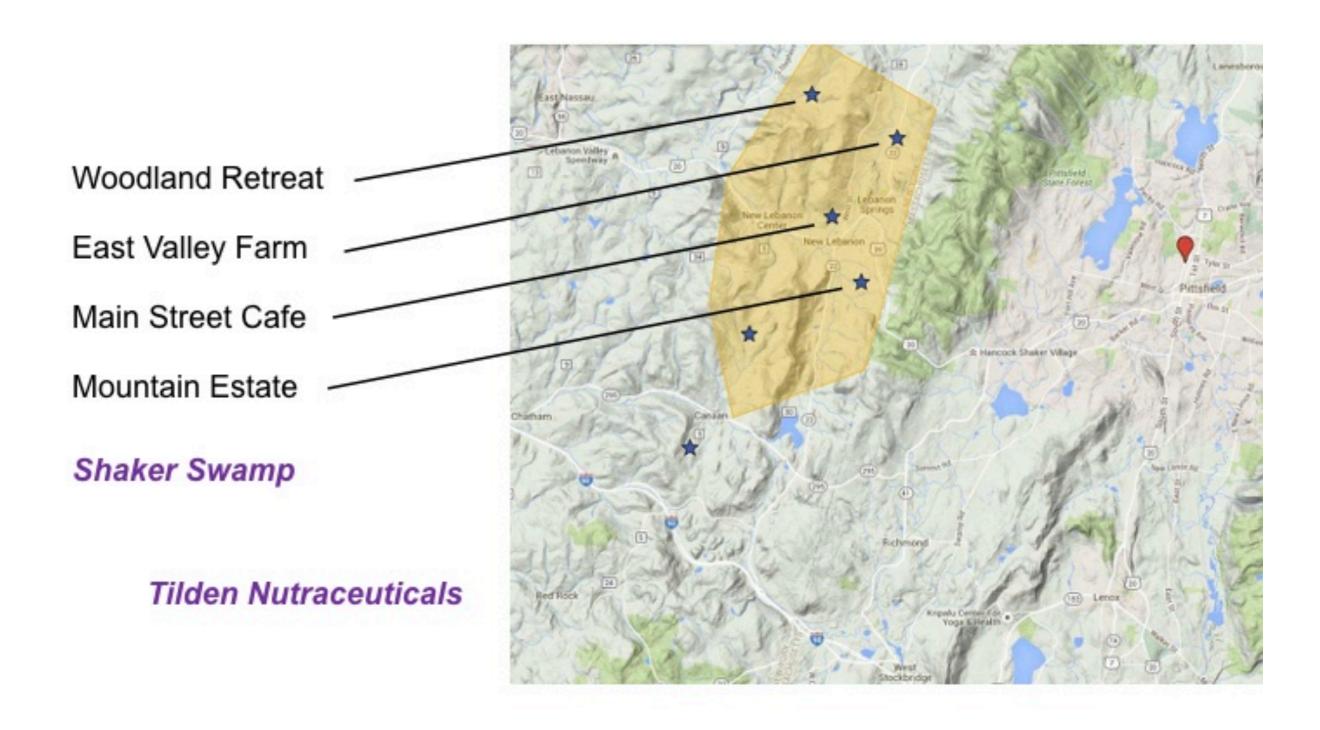
The Integrative Permaculture market garden will serve as an agricultural training center and Riparian Buffer Zone for students, families and aspiring agriculturists. Offering watershed restoration that simultaneously provides a yield and models ecological resilience in the event of flooding, drought and extreme weather conditions, the *Marketplace* will play a unique role in the environmentally friendly local food movement. Offering hands on ecological education that utilizes the latest knowledge in permaculture, bio-dynamics, agroforestry, holistic land management and mindful agriculture, the Marketplace will integrate new knowledge to offer nutritious food and support a healthy planet.

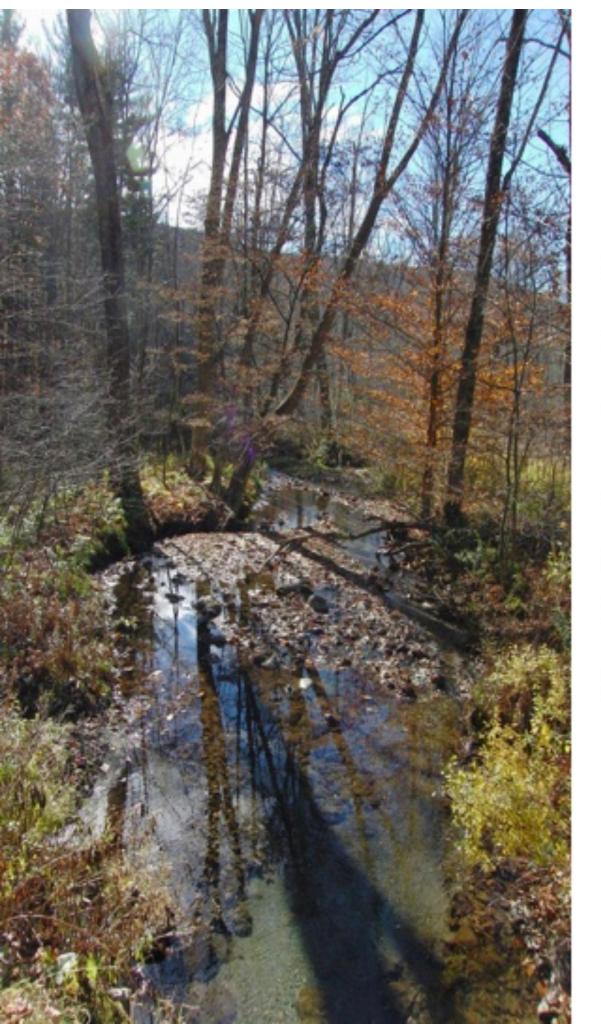
Providing a community gathering place and cultural renewal.



Columbia County - Three Clusters Altamont (46) Delmar Rensselaerville Westerlo (912M) New Baltimore er Medusa (F) (B) Kinderhor I: Freehold Cairo Philmont Hillsdale > Egremont Germantown

Headwaters Cluster





Headwaters Cluster

5 properties

900 acres in total

11 homes, 6 outbuildings, 1 store front

Infrastructure: water, power, septic, roads, etc

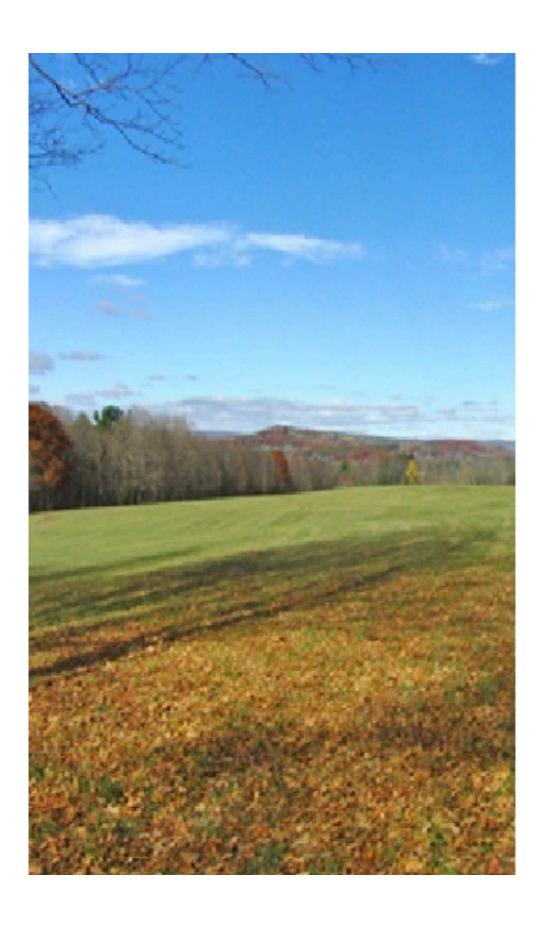
Key assets: commercial kitchen, retail space, large workshop and barns, valuable timber

Zoning: agricultural, commercial, residential

Mountain Estate

- ➤ 200+ acres adjacent to historic village
- ➤ 5 single family houses
- barn, workshop gardens, fields, forest, creeks, pond, trails, views
- backs up to extensive state forest lands
- > friendly, progressive neighborhood
- > potential conservation easement sale





East Valley Farm

- > 300 acre family farm
- 4BR house plus apartment
- Large detached workshop
- Balance of forest and fields
- Backs up to State Forest land
- Close to town yet private
- Beautiful setting, views
- Ponds and creek

Example Integrated Property Master Plan

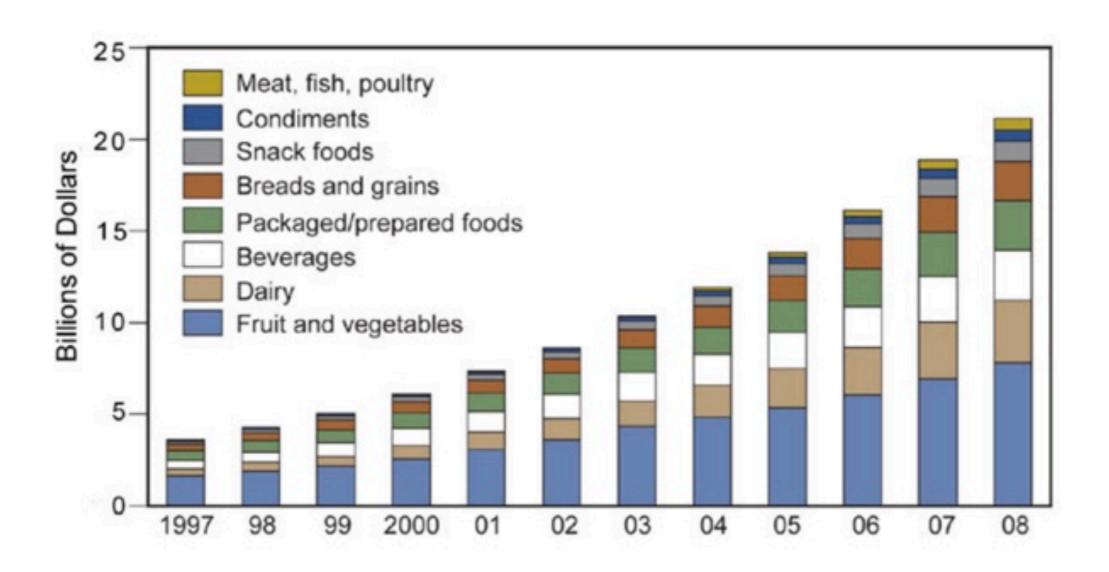


Enterprise Opportunity by Landscape Type

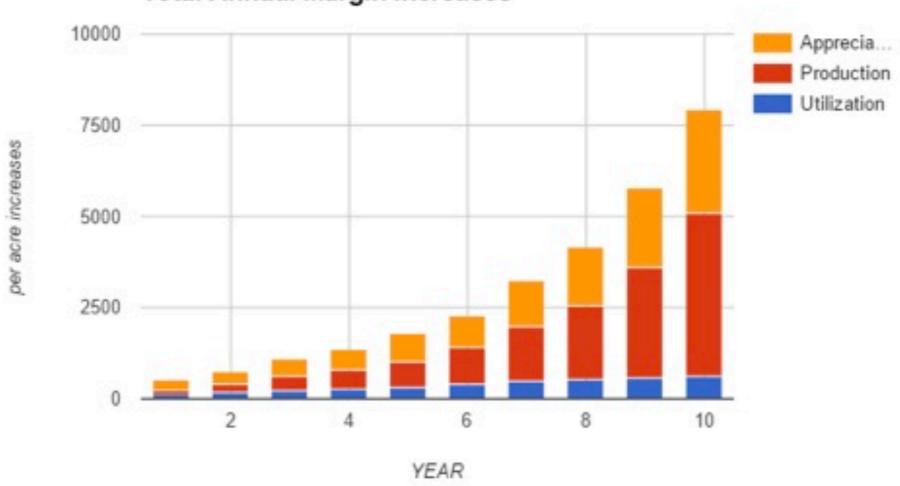
wood products, charcoal, mushrooms, compost Forest Land hogs, turkey, medicinal herbs, habitat, conservation Primary Production goats, sheep, cattle, chickens Pasture Land eggs, milk, honey, wool, nut trees vegetables, herbs, grains, flowers, fruit Field Crops medicinals, compost, greenhouse, solar power light industry, alternative fuels, processing Mixed Uses Secondary teaching, events, studio, workshop, repair, storage store front, market, offices, nursery Commercial classes, events, hospitality, space rentals



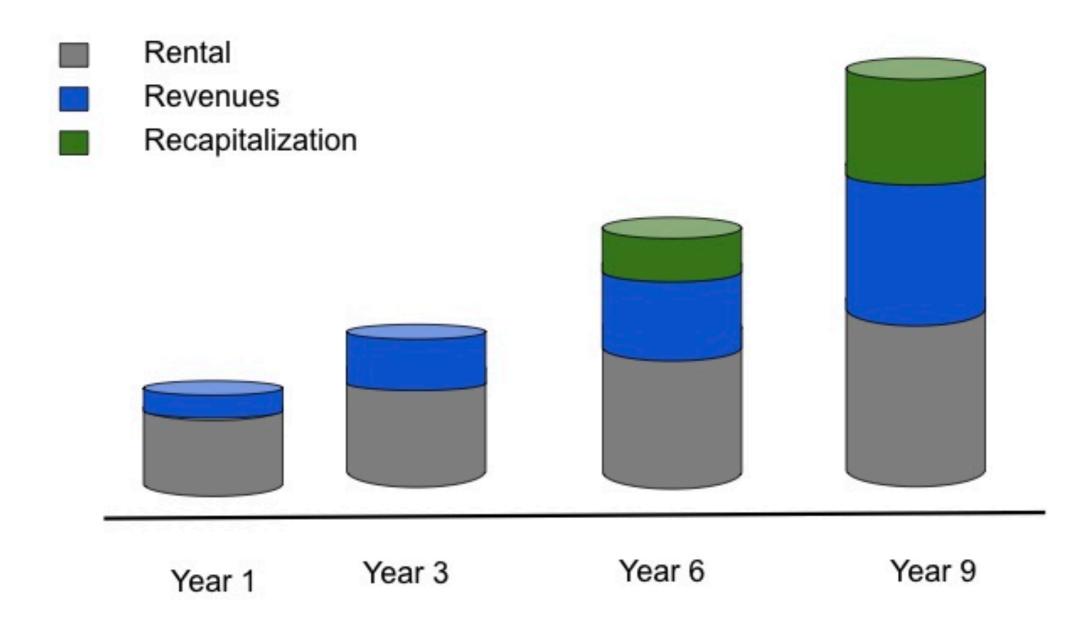
Organic Products Retail Summary (US)



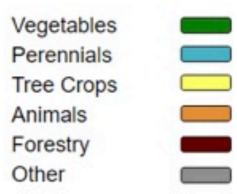
Total Annual Margin Increases

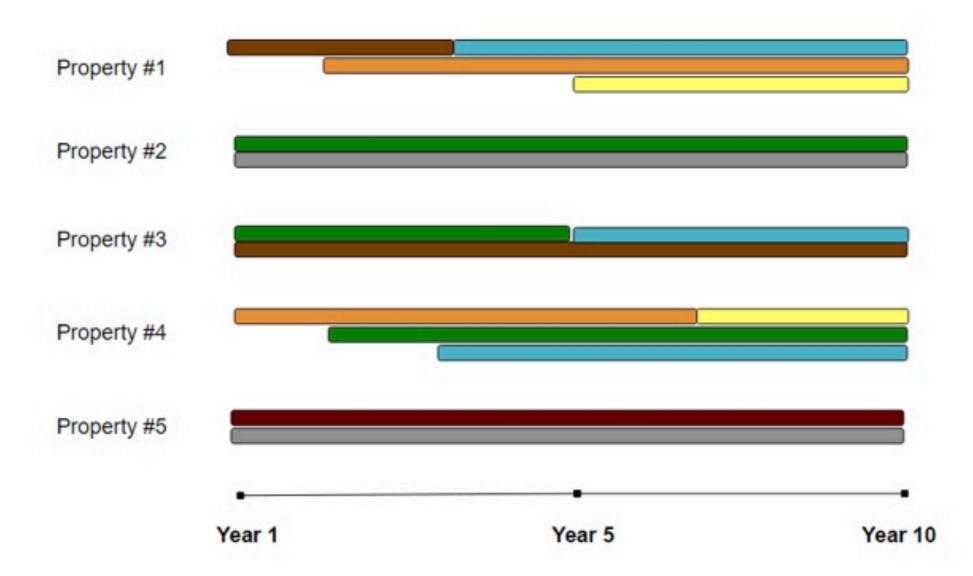


Overall Yield Forecast Summary



Enterprise Development Sequence





Value Proposition of the Enterprise Ecology

Business development and partnership to generate revenues

- 1. Fixed lease option
- 2. Variable lease, with revenue sharing
- 3. Joint venture enterprise incubation

Multiple businesses participate in a mutually beneficial enterprise ecology

- Share facilities and equipment
- 2. Vertical / circular value chain and resource streams
- 3. Joint outreach, marketing, and distribution
- 4. Pooled knowledge, skills, capacity
- 5. Joint ventures Brooklyn and the outlying areas to NYC
- 6. Benefits locally and as model





BENEFITS SHORT & LONG TERM

- Modern efficient craft farming restores soils, natural habitats and the rural economy
- Growing craft natural vegetables is profitable and good for the environment
- ANIMALS, DAIRY
- ESSEX FARM
- creates good lifetime jobs
- builds a broad-based farming economy that
 - benefits our rural communities and can be truly sustainable!

In the Northeast 70% of land under till is planted with commodity crops that depend on chemical herbicides, pesticides, and fertilizers creating biological "dead zones" that lead to increased loss of topsoil among a host of other negative factors

Economy Education Enterprise Environment

Advantages for the Farm

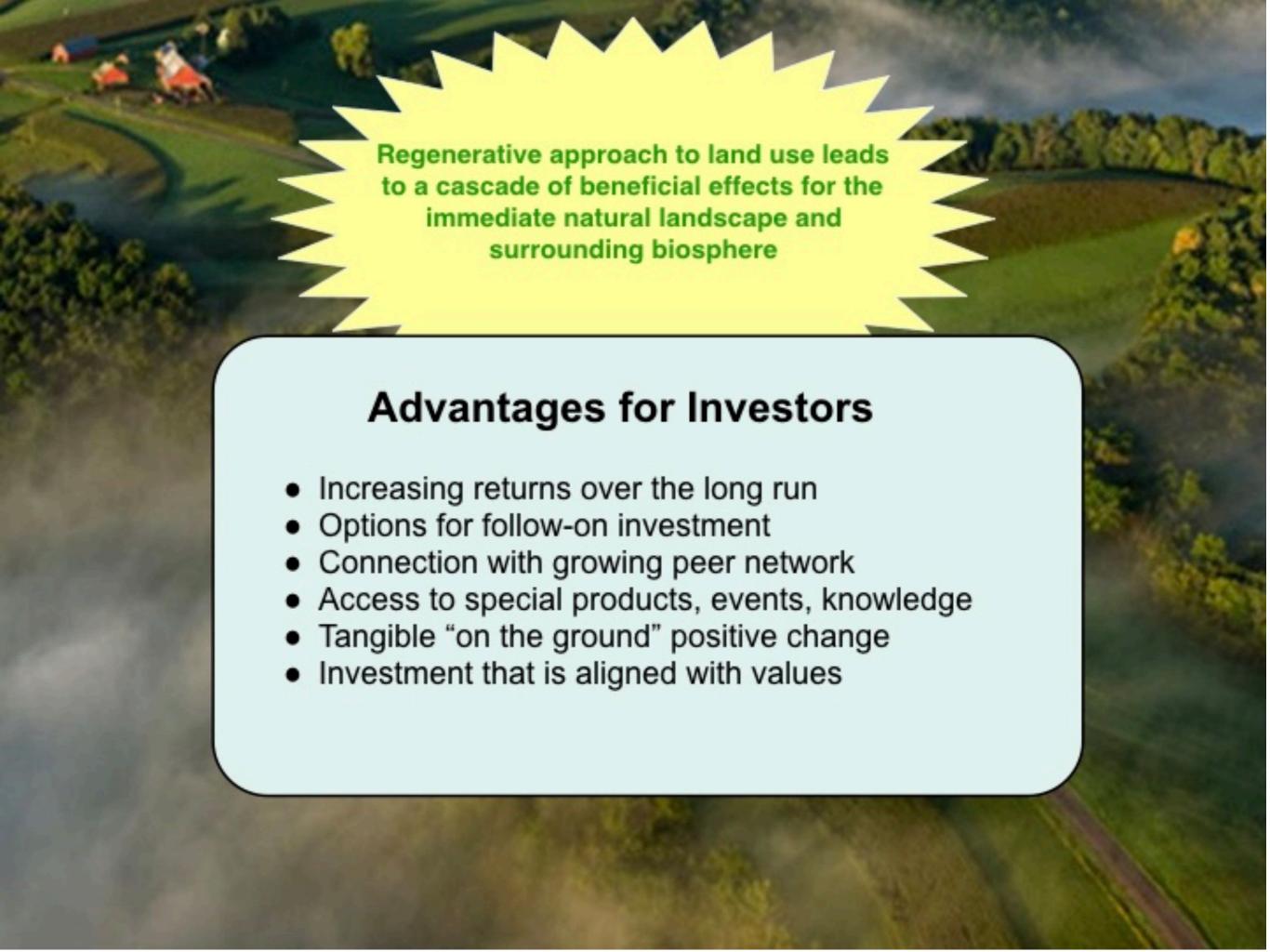
- Increase soil fertility and long term productivity
- Boost profit margin and market stability for products
- Innovation and tech boosts efficiency, lowers costs
- Holistic management builds resilience drought/floor
- Agricultural tax advantages and incentives
- Preservation of historic value and lifestyle











SCALABLE DISTRIBUTION MODELS

via retail, CSA, wholesale, online, and direct

Improve on the CSA model of distribution with:

- ➤ Corporate clients with employees in Natural Food Clubs
- ➤Institutional members (hospitals, schools, hotels, etc.)
- ➤ Customized Shares (vegan, ethnic, macrobiotic, etc...)
- Latest digital apps and customer relation management
- ➤ Efficient distribution to minimize carbon footprint
- Mobile service for events and catering

ENTERPRISE GROWTH MODELS

- Low threshold to launch in local markets
- Virtually limitless growth potential in region
- Smart online outreach and distribution
- Build labor force through learning programs
- Earn stake through sweat equity
- Venture ecosystem benefits

Top market niches include:

- direct fresh CSA model
- non-perishable value add items (dried goods, preserves)
- natural medicinals
- crafted goods and eco housewares
- catered farm events, educational programs, and hospitality

WORK ON THIS FROM NOTES

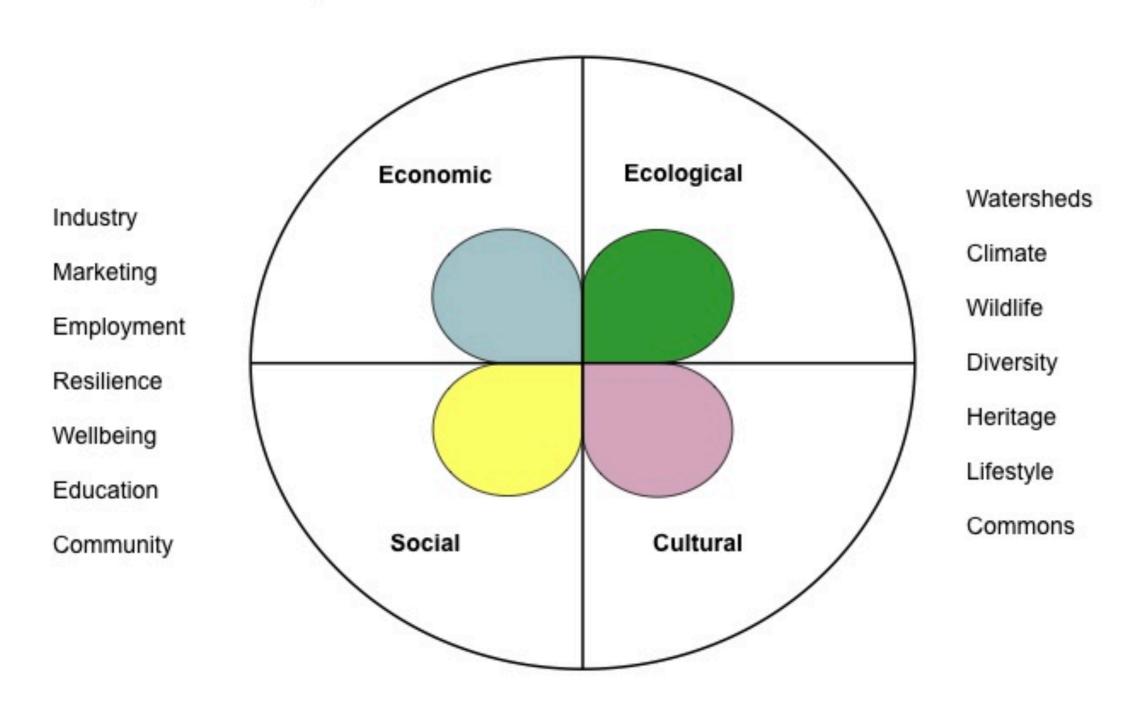
Examples, LEARNINGS and success stories

existing points of reference in area or around the country

- Farmland conversion investment funds (Farmland LP, Iroquois, etc)
- Producer cooperatives, food hubs, innovative distribution models (Our Table Coop OR, growing power IL, Mad River FH VT)
 - Permaculture & holistic mgmt models (New Forest Farm WI, Polyfaces)
- Farm based intentional community (Sunrise Ranch CO, Green Valley Ca)
 - Immersive educational hubs (Stone Barns NY, Hawthorne valley)

Regional Impacts

assessment of wider positive outcomes





Lisa DePiano is a certified permaculture designer, teacher and practitioner with over 15 years of experience. She has taught hundreds of students in various settings from the streets of Occupy Wall Street to the media lab at MIT to delivering the keynote at the 2012 Northeast Permaculture Convergence. She is currently a lecturer at the University of Massachusetts and co-founder and lead instructor of Permaculture FEAST. She runs the Mobile Design Lab which specializes in participatory permaculture design and installation.

Mark Krawczyk is a permaculture and ecological design educator, designer and consultant; traditional woodworker; natural builder; and aspiring forester in Vermont's Champlain Valley. After spending nearly four years traveling the US and beyond, studying with experts in the fields of perennial food production, ecological building, coppice forestry and green woodworking, he settled back in northern Vermont where he just recently began to develop his vision for a 52 acre homestead he purchased in 2012. He owns and operates Keyline Vermont and RivenWoodCrafts, is a member of Seven Generations Natural Builders and counted the community group Burlington Permaculture. He's passionate about manifesting positive change in the world and suffers from an insatiable desire to never stop learning.

Paula Hewitt Amram is the founder of Open Road Park in the Lower East Side. She will be talking to us about the transformation of a former bus depot / brownfield into the thriving community garden Open Road park is today.

Lars Chellberg of CENYC and Water Resources Group Water Resources Group builds and maintains low cost Rain Water Harvesting systems across the five boroughs and leads educational workshops on sustainable water practices. He will be leading a tour of one of the systems he designed for a community garden in the Lower East Side.

Bill Young of Young Environmental LLC is a recognized leader in the environmental field with more than 25 years of experience as a project manager, designer, and wetland specialist. His expertise includes habitat restoration on disturbed lands, wetlands monitoring and construction, botanical inventory, wildlife assessment, streambank restoration; and erosion and sediment control.

David Harper founded Land In Common to assist community organizations, landowners, and local governments in establishing a secure land base for local production of food fuel, and fiber. Current projects include a farmland preservation plan in Boone, Nort Carolina, a tropical food forest network in South Florida, a report on community land trusts for the United Nations, and Cornucopia, an urban agriculture land trust in Durham, North Carolina. Land In Common builds on David's 15-year career as a conservation professional working with land trusts and local governments to raise more than \$3 million dollars in grant funds and preserve over 1,500 acres of farm and forest land. He designed and teaches a master level course in land stewardship at the University of Pennsylvania. The Land In Common vision: free the land/free the people.



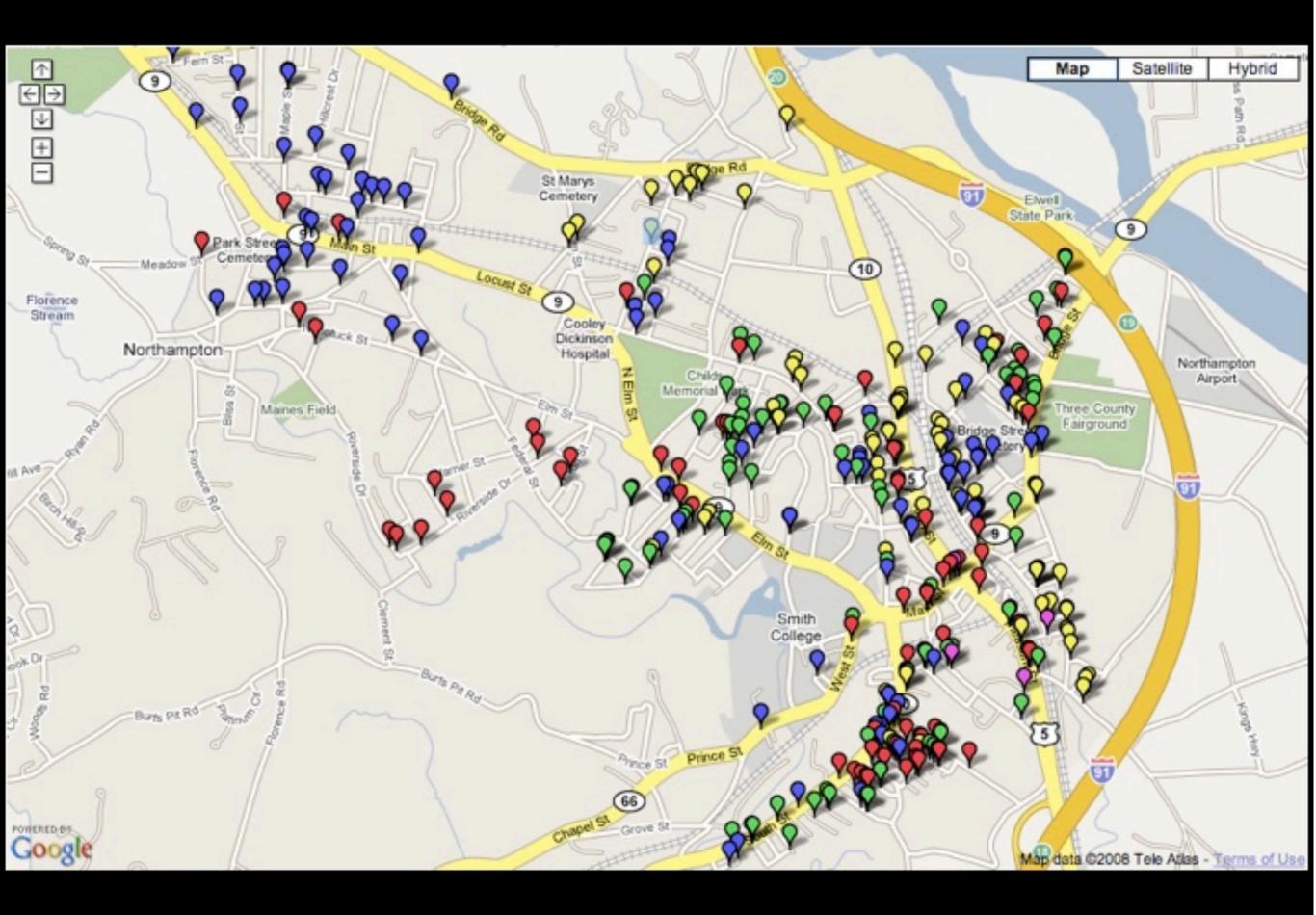


What is so good about Co-ops?

- Products Sourced Locally
- 20% compared to 6%
- Revenues Spent Locally
- 38% compared to 6%
- Jobs created per 1 million in sales
- 9.3 compared to 5.8

Pedal People, started by Lisa Depiano and friends, is a Worker Owned Coop in Northampton MA. with over 700 customers picking up trash and compost for the city of Northampton





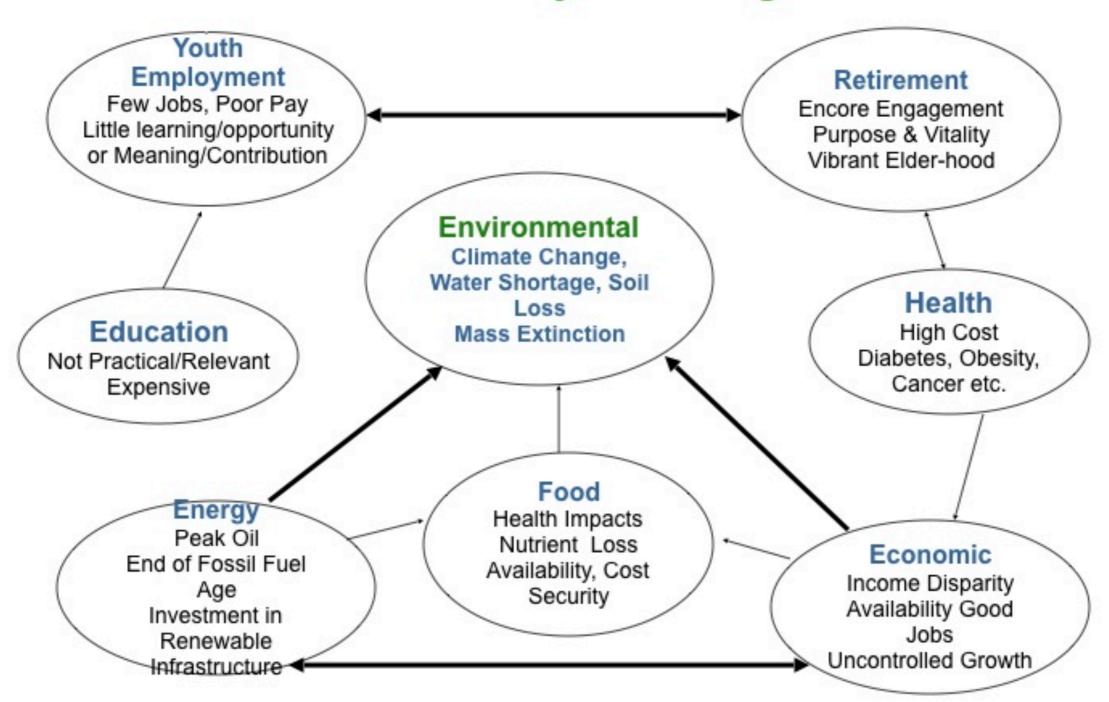
Current Bike Carting & Composting Companies

- Pedal People North Hampton MA
- Metro PED Somerville MA
- Pedal Coop Philadelphia
- New York Composting Company in formation, Williamsburgh





An interconnected system of 21st Century Challenges



Demand is rapidly outpacing supply for healthy, fresh, organic local foods



Food Security & health living are an increasing concern of boomers & millenials alike

24% OF ALL JOBS INVOLVE SOME SEGMENT OF THE FOOD SYSTEM

Millenials seeking meaningful careers and quality of life need good jobs that support a healthy planet



High interest among the young in working as farmers, chefs, nutritionist etc...

Economy Education Enterprise Environment

Food - the Link between Nature & Culture

"... eating represents our most profound engagement with the natural world. Daily, our eating turns nature into culture, transforming the body of the world into our bodies and minds." — Michael Pollan, The Omnivore's Dilemma

Fund Adequate \$

Farm Adequate \$ Food Adequate \$ Feast Adequate \$

Fortify
Adequate \$

.5 US farmland organic; 8% of demand; fastest growing segment of food industry (15% per year)

Champlain Farmland Fund Soil erosion; impact GMO's loss of nutrients; growing demand for high quality natural food. Increased #'s young interested in farming

StoneSpirit System Greater focus on food in US; 24% of jobs in a segment of food industry; profit greater from food directly distributed or pre-processed

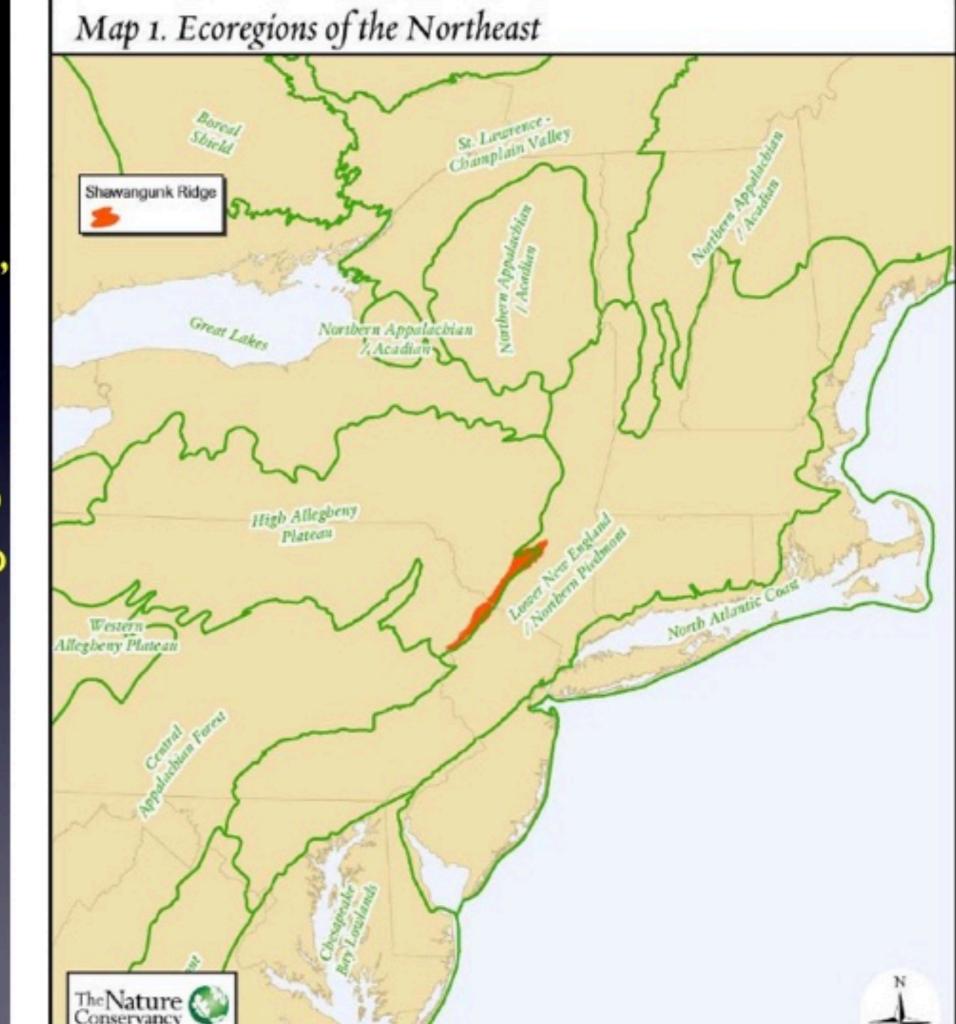
Pleasant Valley Coop Farms \$ spent on meals away from home 26% in 1970; 2010 41% and the % of food prepared away from home 18% in 1978 to 32% 1996

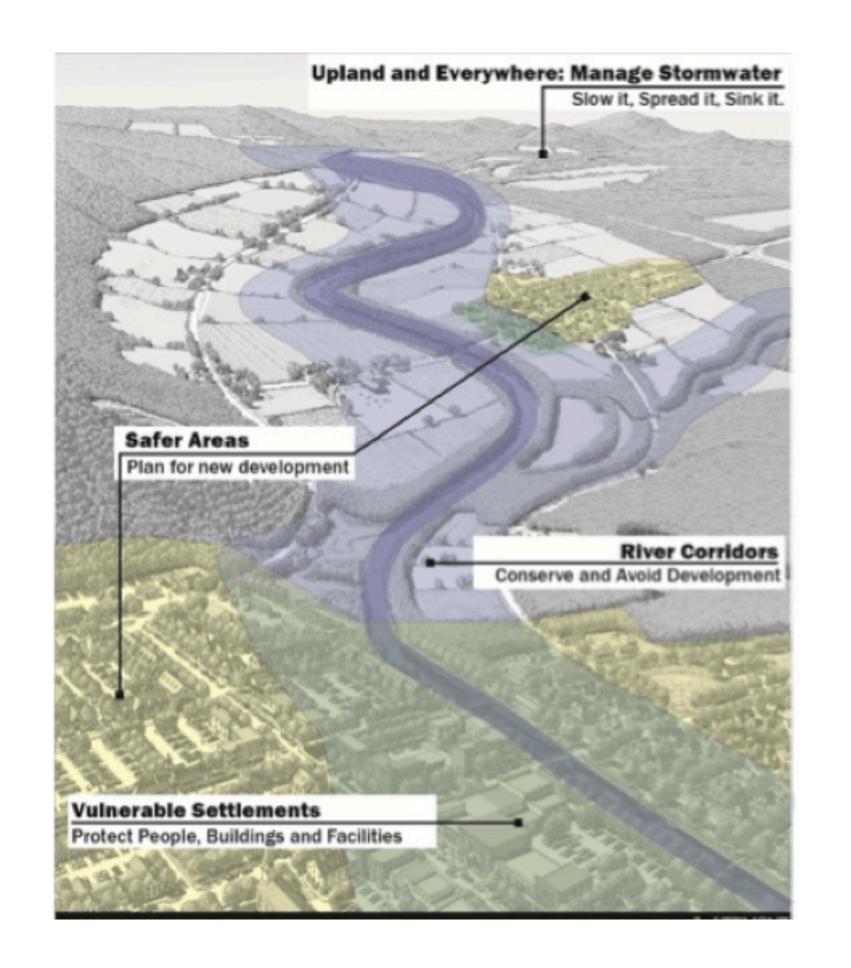
Bistro-Berry Coop Foods Growing concern relationship food, nutrition & health. Poor diet leads to obesity, diabetes hypertension,, etc. More \$ spent on nutritionals

Future Potential

From soil to table & at each stage in between there are significant

Each region will have unique crops, buildings and energy systems that are designed and engineered to be well adapted to each geographic area of the country.





PERMACULTURE ECONOMIES

A New Model of Economic Development

