

## **AGRICULTURE AND CONSERVATION: COMMUNITY SUPPORTED AGRICULTURE & OTHER ALTERNATIVES.**

ENRIQUE ALONSO GARCÍA & ANA RECARTE VICENTE-ARCHE

(Carlos Martínez-Conde & Amaya Sánchez Sánchez have contributed with the description of the Farm Bill Conservation Programs of Annex III and the history of the Farm Bill in Guiding Students' Discussion section)

Friends of Thoreau Program

Research Institute of North American Studies

University of Alcalá, Madrid.

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Michael Victor is a professional farmer. He is the Dairy & Livestock Manager of Appleton Farms, Ipswich, Massachusetts, where he lives with his wife Jennifer and his kid, John Henry.



The livestock and dairy programs include White Park and Jersey cows.



He started working at the farm in 2002 and expects to be able to live as a farmer for the rest of his life. Not too many farmers have such high expectancies. The survival of farms is almost a miracle, in particular of those close to big cities where the price of land is so high that urban development is the most attractive alternative to add value to property, the life styles of urban jobs and professions more appealing to the younger generations, and the costs of production so high that the products cannot reach the adequate market share to achieve a minimum of competitiveness in a global economy.

The destiny of Appleton Farms did not look so hopeful in 1998. Notwithstanding the fact that it is one of the oldest farms of the US (it was established in 1638 as a land grant to Samuel Appleton), the lack of prospective family owners, after nine generations, willing to keep the tradition of the Appleton family and the economic strife through which Mrs Appleton (the widow since 1974 of Col. Francis R. Appleton, Jr, who passed away in 2005) was going through, moved her to deed the 658 acres of one of the most beautiful pieces of land in the East Coast of the U.S. to the Trustees of Reservations, a Massachusetts non-profit. The Trustees briefly describe this estate as a legacy of “scenic views of rolling grasslands, grazing livestock, ancient stone walls, tree-lined carriage paths, and historic farm buildings”.





Seven other professional workers help the Victors with the management of the farm.

At the core of the reasons why agriculture in Appleton Farms still makes economic sense is, in great part, its community-supported agriculture operation (CSA). The participation of the farm in the Agricultural Management Assistance (AMA) program of the United States Department of Agriculture (USDA), Natural Resources Conservation Service, plays also a very important role.



The ecological values of Appleton Farms include woodlands, wetlands, and fields, such as the 133-acre Great Pasture which supports one of the largest populations of rare grassland birds in Massachusetts.



Multiple open spaces with paths (also equestrian paths) allow for its recreational use. Interpretive tours and programs for families and adults are offered throughout the year by the Trustees.





Appleton Farms is not a unique experience in the North East. Most of the farms from Massachusetts ceased to be economically viable even in the 19<sup>th</sup> Century, when the opening of the eastern markets to the Midwest provided most of the big coastal cities with agricultural products cheaper than those cultivated in their close periurban neighbourhoods.

*“The peak of deforestation and agricultural activity across most of New England occurred during the period from 1830 to 1880 and the farms abandonment began in the mid-1800s and continued for more than a Century (...) as numerous forces combined to draw New England farm families away from their rocky hill lands. As farm mechanization increased, these small farms could no longer be worked profitably in competition with the rich, stone-free farmlands of the Midwest, whose products had been made more accessible to eastern markets by the construction of the Erie Canal and the railroads. The growth, associated with the Industrial Revolution, of eastern urban centers along the waterways and railroads, the discovery of gold in California, and the Civil War contributed to the precipitous decline of rural New England*



*populations...*” (David R. Foster & John F. O’Keefe), as the Harvard Forest Dioramas beautifully represent to us all since 1931-1941 from the Fisher Museum.

Pre-Settlement Forest - 1700 A.D.



An Early Settler Clears a Homestead 1740 A.D.



Height of Forest Clearing and Agriculture 1830 A.D.



Farm Abandonment 1850 A.D.



The Modern Forest Landscape (photograph by David Foster)



Nevertheless, the Greater Boston area is well known for the amount of farms still in operation in most of the towns and cities, although the economic environment is clearly suburban or even exclusively urban.

The models differ. Both the towns and the Commonwealth of Massachusetts itself have appropriated large amounts of funds to ensure the maintenance of farms either via covenants with their owners or, in most cases, by the direct purchase of the premises, incorporating them as landmark heritage sites that reflect the cultural spirit of the town at stake or of the State or even integrating them in the State Park system. A few still remain in private hands as traditional family businesses.



Brooksby Farm, property of the Town of Peabody, and part of Essex National Heritage Area



Recreational uses and wildlife management warnings at Brooksby Farm, Peabody

Brooksby Farm, managed by the City of Peabody, is an 8 1/2 acre working farm. Visitors can pick apples, strawberries and raspberries at the orchards, visit the petting zoo, browse the farm stand, or hike on the many trails on the property. Brooksby Farm is also the location of the historic Nathaniel Felton Sr. and Nathaniel Felton Jr. homes, the Smith Barn, and the Woodland Gardens, which are operated by the Peabody Historical Society. North of Boston, from the Atlantic Ocean to the Merrimack River, the Essex National Heritage Area also holds some of the earliest settlements, maritime and industrial sites in the United States.

The Commonwealth of Massachusetts manages Great Brook Farm State Park, which stands as a jewel in Northern Massachusetts Agriculture. Native Americans used sections of Great Brook Farm as sacred sites. *“The arrangement of open fields, sturdy walls, diversified woodlands and historic structures are significant images of Massachusetts agricultural past”* (State Park System). An active dairy farm operates year-round and guided barn tours are usually available. Amidst the beautiful scenery lie 20 miles of trails for hiking, bicycling and horseback riding. During the winter months,

trail-grooming allows cross-country skiing and one trail is lantern lit for a "moon light" experience. One of the farm buildings has been converted to a ski rental concession.



Entrance to Great Brook State Farm in Carlisle, Massachusetts



Interpretive Center at Great Brook Farm State Park





Educational, recreational, and direct sale to consumer practices at Great Brook Farm

The destiny of these farms is not necessarily bound to the condemnation of property by the local or state governments. In the case of Appleton farms several arrangements have allowed for its subsistence under programs such as AMA of the Federal Government although it is its economy, based in a new alternative agricultural scheme (community-supported agriculture), what explains its vitality.

Other private farms still subsist in the area. Most of them do not only offer products to locals or by-passers. They are also centers around which local community life takes place all through the year or seasonally. In communities such as Carlisle or Bedford the ice cream sales counters of the farms are places where many of the neighbours can be easily met in any Saturday or Sunday afternoon of the hazy summer months.



Private farms in Bedford, Carlisle, and Hamilton

Development, though, is the normal destiny of most of the remaining private farms.



Huckins Farm, a 1989 Development in the Town of Bedford

**Community-supported agriculture (CSA)** is a partnership between a farm and a community of supporters that provides a direct link between the production and the consumption of food. The consumers get food whose production process they know about (they pay for the seeds, fertilizer, equipment maintenance, labor...) by advancing every year an estimated cost to the farmer, sometimes paid in a monthly basis (in the case of Appleton Farms, they pay 500\$ upfront and get every week their of vegetables: tomatoes, cucumber, potatoes...). In some cases the farmers and additional volunteers allocate the ratios; in other cases –or for some harvests- people gather the food using the honor system. The community of consumer-supporters shares the risk so farming becomes economically stable because the farmer is guaranteed a totally reliable market for a selection of crops. If enough networking is created, the farmer might every now and then obtain other products from other CSA farms locally or regionally not far away from their own. Biodiversity preservation and stewardship of the landscape add to the values usually attached to the scheme.

The Robyn Van En Center, based at Wilson College in Chambersburg, Pennsylvania, one of the most important supporters and research centers of community-supported agriculture in the U.S, defines CSA as *“a relationship of mutual support and commitment between local farmers and community members who pay the farmer an annual membership fee to cover the production costs of the farm. In turn, members receive a weekly share of the harvest during the local growing season. The arrangement guarantees the farmer financial support and enables many small- to moderate-scale organic and/or bio-intensive family farms to remain in business. Ultimately, CSA programs create "agriculture-supported communities" where members receive a wide variety of foods harvested at their peak of freshness, ripeness, flavor, vitamin and mineral content.”*

As the Robyn Van En Center explains, its goals are a sustainable agriculture system which:

- provides farmers with direct outlets for farm products and ensures fair compensation.
- encourages proper land stewardship by supporting farmers in transition toward low or no chemical inputs and utilization of energy saving technologies.



- strengthens local economies by keeping food dollars in local communities.
- directly links producers with consumers allowing people to have a personal connection with their food and the land on which it was produced.
- makes nutritious, affordable, wholesome foods accessible and widely available to community members.
- creates an atmosphere for learning about non-conventional agricultural, animal husbandry, and alternative energy systems not only to the farmers and their apprentices, but also to members of the community, to educators from many fields of study, and to students of all ages.

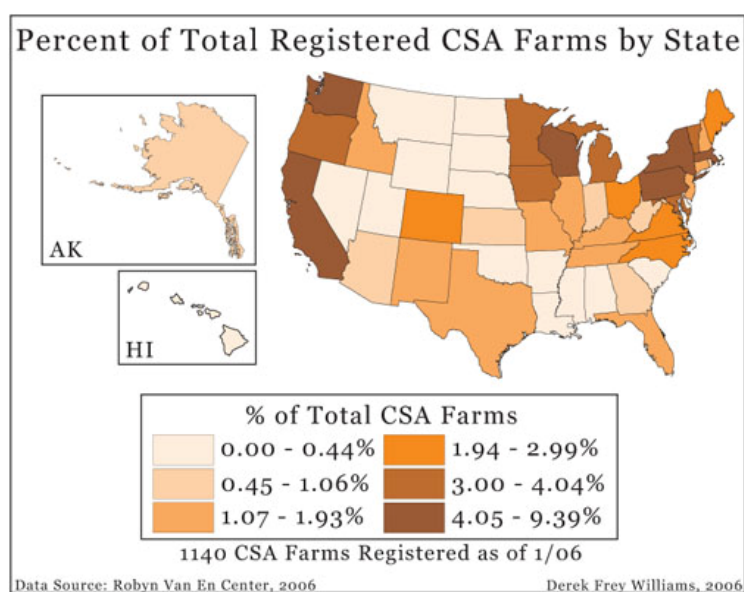
CSA has allowed the preservation of many small, and sometimes medium, farms. The retiring of traditional farmers, the lack of incentives for young people, the pressure for development, the increasing land prices and costs of production, low food process, excessive real state taxes, and the restructuring of the global economy ... can be overcome through this type of schemes. CSA contributes to the diversification of the local and regional economy and preserves the bioregional traditions and ways of life, as well as biodiversity and landscape.

CSA originated in Japan where some groups of women arranged (*teikei*) the direct contact between producer and consumer by “putting the farmer’s face in the food”. According to the Robyn Van En Center it moved from Japan to Switzerland and from there to the US where the first arrangement was institutionalized in 1985 by Robyn Van En at Indian Line Farm in South Egremont (Massachusetts), expanding from there into a network of 1,100 farms by 2004 and 1,500 by 2006. Usually membership implies signing a letter with terms of reference, expectancies, or understandings. Whether values involved are exclusively based on access to food safety and quality or imply a deeper meaning (place for solace, weekly ritual of contact with the farmer, sharing of feeling of dependency from a community, social empathy on the annual collective celebration of harvest..) usually depends on the individual member, but certainly a common thread is environmental concern, both food- (content of the food: organic, non GMO based, etc) and land-related (no chemicals, landscape and biodiversity protecting policies..).

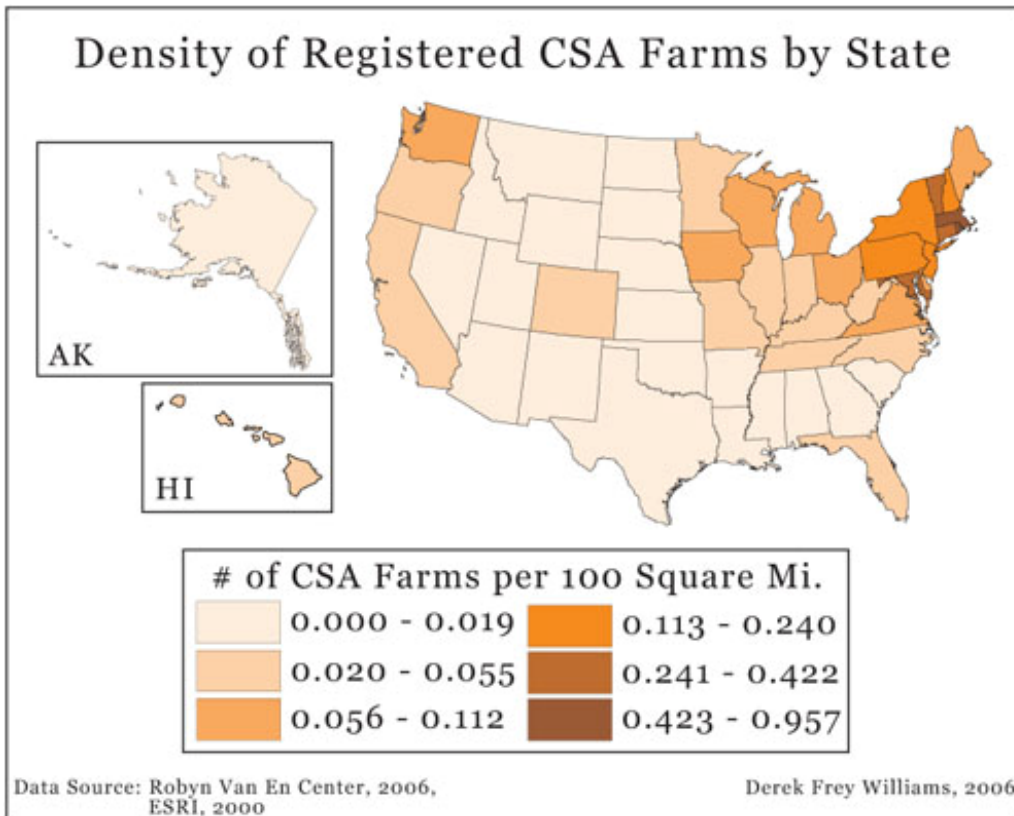
As the Robyn Van En Center declares, “there are many kinds of CSA farms. All include payment in advance at an agreed upon price. In some, members of the community purchase a "share" of the anticipated harvest, while in others they sign up for a predetermined amount of produce over the course of the season. In most cases, this commitment implies a willingness to share with the farmer both the bounty from the land and at least some of the risks involved with production.

In return for fair and guaranteed compensation, consumers receive a variety of freshly picked, (usually organic) vegetables grown and distributed in an economically viable and ecologically responsible manner. Some farms also offer fruit, herbs, flowers and other products, such as meats, eggs, cheese, and baked goods. Many farms offer their shareholders the opportunity to work in the fields or distribute produce in exchange for a discounted share price. Others offer sliding scales to accommodate lower income consumers. In this way, farmers and members become partners in the production, distribution and consumption of locally grown food.

One fact also to consider, organic food produced within local communities is not the same as organic food transported over long distances. When members obtain food from local farmers, environmental costs associated with the transport, processing and distribution of organic food and the consumption of fossil fuels are significantly reduced. Considering that the organic food available to members was produced locally rather than transported over long distances, the cost to the environment is significantly less.”



The map below depicts the density of CSA farms in each US state, derived by dividing the number of farms in each state by that state's total land area.



The USDA has started recently to sponsor the idea at least by spreading out information and compiling literature on the economics and logistics of CSA through its Alternative Farming Systems Information Center (AFSIC) [see [Annex I](#) to this Case Study]. In some cases, it adds its classic agriculture support programs from its budget to the farms that adopt that scheme.

Thus, when the USDA assessed Appleton Farms potential as an economically viable farm when the Trustees took over, it reached the conclusion that *“Appleton Farms’ cropland is situated on very droughty soils. It was essential for the Trustees that irrigation water be available to have a successful CSA. Historically the fields were irrigated from the Miles River. This water source is no longer viable for the operation for a number of reasons; the river has very low flow rates especially when irrigation is necessary; and the land along the river was sold in the 1930’s so Appleton Farms no longer had access. Additionally the river is at least a half mile away and access required crossing Route 1A”*.

So Appleton Farms –under the management of The Trustees of Reservations- and the USDA-Natural Resources Conservation Service agreed to a plan to develop reliable irrigation water paced with the growth and success of the CSA. With the aid of the **Agricultural Management Assistance (AMA) Program**, Appleton Farms was able to install 2000 feet of underground mainline from a new well (not part of AMA) to the CSA fields. This provides drip irrigation capacity to the 15 acres of vegetables. The line was installed in spring of 2002 and the CSA had its first 100 shareholders for the harvest of 2002.

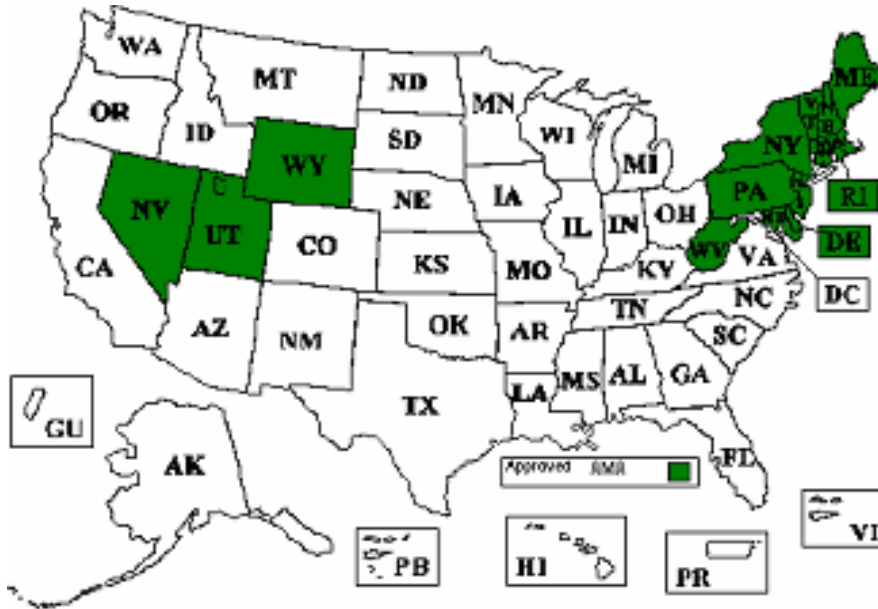
As Kathryn Zichelle Sullivan, Soil Conservationist, Westford, Massachusetts, has put it, *“farm manager Wayne Castonguay said that the CSA would not have gone forward without the capability of irrigation and the USDA planning with the AMA risk management support. So the AMA program is helping to feed 400 families who are also learning about farming, nutrition, organic methods and local agricultural issues, while the economic viability one of the oldest farms in the country has been rejuvenated.”*

AMA provides cost share assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into their farming operations. It is administered by NRCS, is a voluntary conservation program available in 15 states (Massachusetts is one of them, see map below) where the participation in the Federal Crop Insurance Program has been historically low.

AMA is a voluntary program of the Farm Bill. It provides cost-share payments to farmers and ranchers interested in addressing issues such as water management or irrigation structures, water quality. It is also designed to mitigate risk through production diversification or resource conservation practices, including soil erosion control or integrated pest management.

USDA’s Natural Resources Conservation Service (NRCS) is the lead agency for the conservation provisions of AMA. The Agricultural Marketing Service (AMS) is responsible for an organic certification cost-share program, and the Risk Management Agency (RMA) is responsible for mitigation of financial risk through an insurance cost-share program. In Massachusetts, cost-share is available to producers for drought mitigation. Program participants may develop or improve sources of irrigation water

supply, construct new or reorganize irrigation delivery systems on existing cropland to mitigate the risk of drought. Incentive payments are available to encourage producers to adopt irrigation water management [See, in Annex II, the current Massachusetts AMA Brochure].



The 15 states where AMA is available

To apply for AMA assistance, producers in these 15 states submit an application to the local NRCS or conservation district office. The application must have a conservation plan for the area covered, and the conservation plan becomes the basis for developing the AMA contract. NRCS will work with the landowner to develop a conservation plan. Landowners must agree to maintain cost-shared practices for the life of the practice. Contracts last from 5 to 10 years.

The federal cost share is 75% of the cost of an eligible practice. Participants are paid based upon certification of completion that the approved practice has been completed according to NRCS standards and specifications.

The whole operation of the conservation of Appleton Farms is unthinkable without the decisive intervention of The Trustees of Reservations whose origins can be traced to March 5, 1890, when the New England periodical *Garden and Forest* carried a letter entitled "The Waverly Oaks." Its author was Charles Eliot, a young landscape architect then practicing in Boston, who proposed the establishment of what would become The Trustees of Reservations. Thus, the oldest nature conservancy NGO of the U.S., that operates in Massachusetts, is able by using agricultural policy techniques to contribute to conservation without the need to create nature reserves.

But in broader terms these linkages between environmental, or rather conservation NGOs and farmers are becoming usual in many places in the US, in many instances favored by the Natural Resources Conservation Service of the USDA which never stops short in raising awareness about the potential for nature conservation of many of the programs of the Farm Bill, the legal instrument of the US whose origins can be traced to President Roosevelt's New Deal, and that was initially devised as the major instrument of its agricultural policy to fight against the Great Depression through fair price maintenance for farmers who voluntarily reduced production and, during the Dust Bowl, in 1933, to combat soil erosion.

In the current Farm Bill program, the Farm Security and Rural Investment Act of 2002, the Conservation Programs have increased their importance. They respond to a broad range of emerging natural resource challenges faced by farmers and ranchers, including soil erosion, wetlands wildlife habitat and farmland protection to ensure land remains healthy and productive.

The following table lists the programs –besides the AMA- of the Conservation Title of the said Farm Security and Rural Investment Act of 2002.



## **The next Farm Bill.**

The Farm Bill of 2002 – 2007 needs to be reauthorized in 2007. The budget reduction and the agricultural subsidies negotiations within the World Trade Organization are going to influence in the next Farm Bill. Although the recent failure and suspension (July 2006) of the negotiation process allow the US Congress more flexibility than what was originally planned (Hanrahan & Schnepf).

It is necessary to think about how to distribute available funds in the most efficiently way, and how to maximize competitiveness, which is the way to fairly distribute the assistance among producers, thinking both in the communities and in the consumers. It will also need to assess which are the best conservation and environmental goals to achieve.

Producers and stakeholders have had the chance to be heard in the 52 Farm Bill Fora that were organized around the country, and also through the website and other proactive participation techniques. The comments received, more than 4000, have been summarized and categorised in 41 papers that can be consulted in the USDA webpage.

Concerning the Conservation Programs the opinions have been organized around the following issues: Native American Tribes, endangered species, conservation payments, organization of the farmers, and conservation stakeholders. The general purpose is to increase conservation efficiency. One of the agreed objectives is the promotion of information on the USDA conservation programs among the Tribes in order to increase their participation, and to include the Alaskan agricultural regions in the next Farm Bill. Many of the suggestions insist on the need to promote the conservation goal versus the commodity payments and to recognise the effort of the farmers who are promoting good conservation practices with incentives, as well as to promote the maintenance of local and rural farms. The need to encourage the Federal and State Governments to work more closely on environmental aspects has been also acknowledged.



Some State policies work on their own grounds, not linked to any federal grants program such as the farm Bill. Colorado is a clear example.

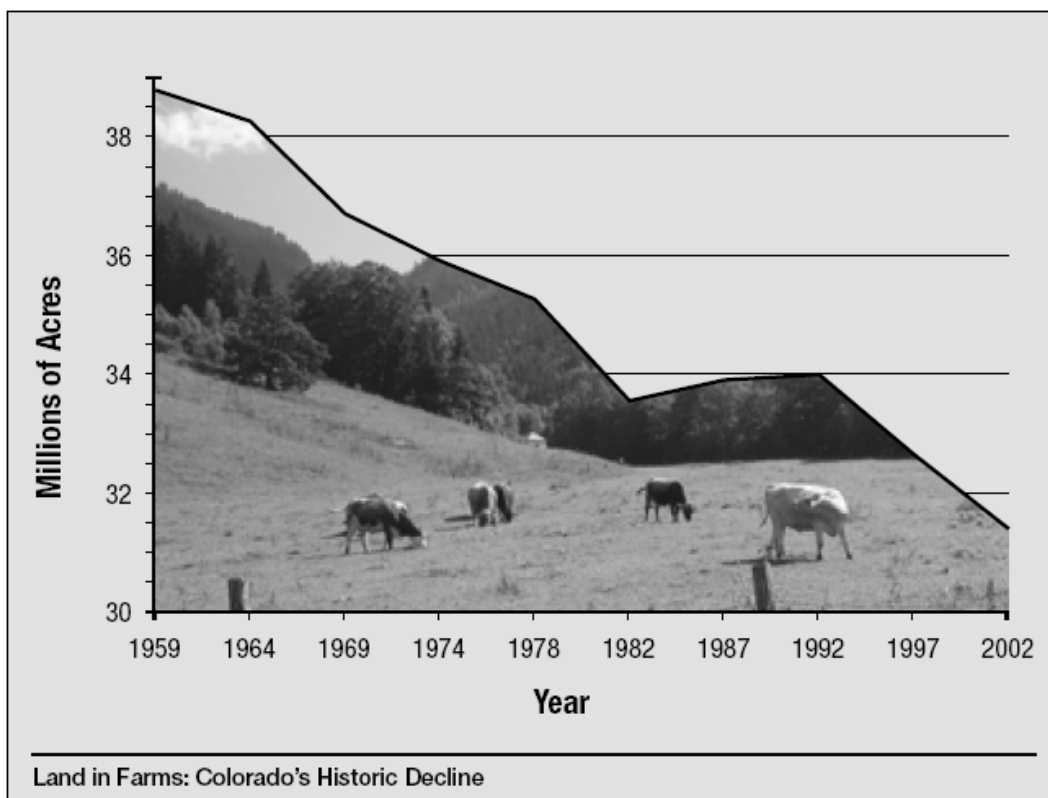
Almost half of its territory is agricultural land (eastern & south central territory). One-third of its counties are either dependent on agriculture or classified as “agriculturally important.”

*“Colorado is fortunate to have one of the country’s most successful state conservation incentives in the conservation easement tax credit program. Since its inception in 2000, this unique program has helped preserve thousands of acres of critical agricultural lands, wildlife habitat, water resources and scenic vistas across the state. Moreover, the program has provided the financial means necessary to help many ranching and farming families pass their land on to new generations, thus maintaining an important rural economy”* (Colorado Coalition of Land Trusts, September 2005).

Established in 2001, the Conservation Easement Tax Credit Program allows landowners who donate a conservation easement on their land to receive a credit on their Colorado state income tax of up to \$260,000. If the landowner cannot use the credit, he/she can sell it to someone who can. In general, sellers receive 80% of the value of the credit and buyers pay 90%, with the remainder going to the broker and to conservation organizations. The program had a record year in 2003, with more than \$40 million in tax credit transactions completed and tens of thousands of acres preserved. In three years, it became the largest conservation program in Colorado. Conservation groups such as the Colorado Coalition of Land Trusts (CCLT) have been successful in recruiting buyers of credits, generating positive press coverage for the program, maintaining quality control, and working with credit buyers to direct their tax savings to conservation projects. For example, CCLT work with groups to form an advisory board for the largest credit broker in the state to ensure the quality of the program.

Nevertheless, as the Environment Colorado Research and Policy Center has made clear, the future of Colorado ranch and farmlands is close to doomed. As the Environment Colorado Research And Policy Center stated in March 2006, Colorado has lost 1.26 million acres of agricultural lands since 1997, and it is estimated that by 2022 Colorado will lose 3.1 million more. It is happening notwithstanding the importance of productive

agriculture to the rural economy, the environment, and to tourism. Agribusiness is a \$16 billion sector of Colorado's economy, providing 13.2% of total jobs. Farmers and ranchers face increasing economic pressure to sell as farm and ranch land is appreciating in value. The average real estate value for agricultural land increased 16% between 1999 and 2003, to \$730 per acre. The yearly interest accrued from the profits of a multi-million dollar sale of ranchland is often more than property owners can earn from ranching in that same year. In addition, agriculture in Colorado has become relatively less profitable in recent years. While a drought plagued producers in 2002, overall farm sales in real dollars have been in a steady decline since 1990. In 2002, 60% of Colorado's farms and ranches had total annual sales of less than \$10,000. Since 1992 the average farm size has decreased by 21%, and between 1997 and 2002 the amount of debt versus equity for Colorado farms rose to 18% as average production costs increased. Social factors also influence trends in rural areas. Many children of farmers and ranchers are choosing careers outside of agriculture, leaving no one to operate family farms. The average age of farmers is 55, up from below 50 in 1972.



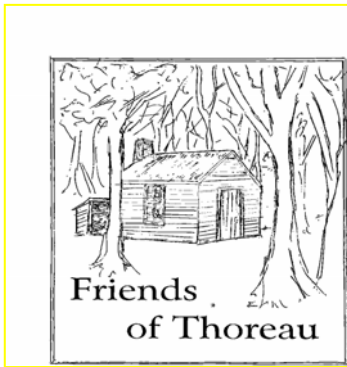
Source Losing ground, Colorado's vanishing agricultural landscape, Environment Colorado Research And Policy Center, March 2006

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Additional alternatives that contribute to increase and diversify farmers' income, such as agritourism or agrieducation, are explored in other sections of this case study (see e.g. the case of Vermont farms association in the Guiding Students Discussion section).

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As a concluding remark agriculture is a major use of the land surface of the USA with nearly two-thirds of it being farmland, ranchland, or private forestland. As we have seen, the USDA has focused its efforts on maximizing the potential impact of agricultural production on resource use and quality, and protection of natural ecosystems and the 2007 Farm Bill looks forward to continue to grow in this direction.



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## **SCHOLARS' DEBATE**

### **1.- Organic agriculture: reality or myth?**

Organic agriculture, usually present in all community-supported agriculture (CSA) schemes, is conquering the U.S. markets so quickly that it is unclear if it will disappear victim of its own success.

The understanding is that organic agriculture means food grown without the assistance of man-made chemicals; more technically speaking, from the regulatory point of view (requirements to get certified), organic farms are companies that must eschew most pesticides, hormones, antibiotics, synthetic fertilizers, bioengineering, as well as radiation. The market has even a broader notion: purists think that organic food requires

also that farmers treat their personnel and livestock with respect and supply products locally so that the production process does not leave an environmental footprint that does not respect sustainability (energy consumption, excesses in transportation...).

Due to its success, it has moved from local markets to full distribution chains and even to the traditional chains. From Wal-Mart, to General Mills, Kellogs, Danone, Unilever, Kraft Foods... the industry is looking for organic products because of the profits obtained by the first comers such as Dean Foods (owner of Horizon Organic, Rachel's Organic, and Organic Cow of Vermont), or Hain Celestial (owner of Earth's Best, Arrowhead Mills, and Walnut Acres Organic). This generalization of organic food to the main companies of the food supply market obliges the organic industry (primary producers) to broaden its supply base, forgoing changes in the processes of production that may eventually lead them far from their ideological origins.

Is the future of organic food limited to local CSA types of markets? Can the big food chains pretend to become essentially, or at least mainly, organic?



## **2.- The WTO negotiations.**

One of the most heard stories about international relations is the need to reform the U.S. and E.U. agricultural policies, getting forever rid of subsidies, so that the developing countries can finally compete in a fair way in the international markets. It is also usual to hear about the failure, year after year, of negotiations because of the U.S. and E.U. unwillingness to reach at least a bilateral agreement on the issue that would have a spin-off effect in the rest of the multilateral WTO negotiations..

One alternative policy that would help the reduction of subsidies would consist in unbundling the subsidies so that they are not linked to prices, nor to production. One way of doing it is by providing “green subsidies”: paying the farmers, for example, for maintaining biodiversity [what Ferraro & Kiss, from the World Bank, call “direct payment” that could be applied in Africa in order to maintain its wildlife habitats].

Independently of whether these subsidies would really be supported by farmers who might perceive them as totally alien to their role in society, would they really produce the desired effect of liberalising international markets? Why then do the main export developing countries talk about “green protectionism” and are in principle against them? Are biodiversity and/or landscape preservation subsidies included in what the WTO jargon of the Doha Round negotiations calls the “green box” subsidies which on principle will have no limits under international trade law if the 2004 framework agreement of the negotiations remains unchanged?

A different issue is how global trade might affect agricultural biodiversity. The issue has not been well researched although the Convention on Biological Diversity has done an initial assessment (see the Links to Online Resources, Works Cited and Additional Bibliography section of this case study).

### 3.- U.S. and E.U. agricultural policies.

The following figure summarizes the history of the U.S. Farm Bill since 1933.

History of the Farm Bill and the Conservation Programs		1933	1935	1936	1937	1956	1961	1965	1970	1973	1977	1981	1985	1990	1996	2002
ACTs	PROGRAMS															
<b>Agricultural Adjustment Act (PL 73-10) 1933</b>		█														
<b>The Soil Conservation Act 1935</b>			█													
<b>Soil Conservation and Domestic Allotment (SCDA) Act of 1936.</b>	Agricultural Conservation Program (ACP)			█												
Standard State Soil Conservation District Law 1937					█											
<b>The Agricultural Act of 1956</b>	Acreage Reserve and Conservation Reserve					█										
The <b>Emergency Feed Grain Act</b> of 1961							█									
The 1965 Act ( <b>Cropland adjustment plan</b> )								█								
<b>Agricultural Act</b> of 1970 (PL 91-524)									█							
<b>Agriculture and Consumer Protection Act</b> of 1973										█						
<b>Food and Agriculture Act</b> of 1977	Forestry Incentives Program (FIP)										█					
<b>Farmland Protection Act (FPPA) 1981</b>	Special Areas Conservation Program, Small Watershed Program, Matching Grants for Conservation Activities, Reservoir Sedimentation Reduction Program, Resource Conservation and Development Program, Farm Land Protection Policy Act, Local Search and Rescue Operations, Payment for Land Remove from production for conservation purposes, and Conservation Tillage											█				
<b>Food Security Act</b> of 1985	Highly Erodible Land Conservation, Wetlands Conservation, Conservation Reserve and others (Technical Assistance for surface Water, Soil and Water cons., Softwood Timber, Dryland Farming, Farmland protection, 1986 Reserve Program.)												█			
Emergency Wetlands Resources Act of 1986																
<b>The Food, Agriculture, Conservation, and Trade Act of 1990. (FACTA)</b>	Wetlands Reserve Program (WRP)														█	
<b>Federal Agriculture Improvement and Reform Act of 1996</b>	Environmental Quality Incentives Program(EQUIP), Conservation Innovation Grant (CIG), Wetland Reserve Program (WRP), Wetland Habitat Incentives Program (WHIP), Farm and Ranch Lands Protection Program (FRPP), Conservation and Development Program (RCyD), Conservation Reserve Program (CRP),														█	
<b>Farm Security and Rural Investment Act 2002</b>																█

The current 2002-2007 Farm Bill was enacted as the **Farm Security and Rural Investment Act of 2002**. It was signed into law on May 13<sup>th</sup>, 2002. Its provisions promote the production of a reliable, safe, and affordable supply of food and fiber; promote stewardship of agricultural land and water resources; facilitate access to American farm products at home and abroad; encourage continued economic and

infrastructure development in rural America; and ensure continued research to maintain an efficient and innovative agricultural and food sector. As it was described in the text of the Main Page and in Annex III of this case study, it emphasizes conservation on working land by increasing funding for the Environmental Quality Incentives Program and establishing a new Conservation Security Program, which pays producers to adopt or maintain practices that address resources of concern. Land retirement programs were also expanded, placing particular emphasis on wetlands. Funding is expanded for farmland protection too. A new Grassland Reserve was created to assist landowners in restoring and conserving grassland. A new provision aimed at ensuring regional equity in conservation funding.

The Farm Security and Rural Investment Act of 2002 has the following titles: Commodity Programs, Conservation, Trade, Nutrition Programs, Credit, Rural Development, Research and Related Matters, Forestry and Energy.

The commodity regulation provides support to different crops which are wheat, feed grains, upland cotton, rice, peanuts. Subsidies consist on direct payments, counter-cyclical payments, marketing loans and a quota buyout.

The Trade Programs are designed to develop and expand commercial outlets for U.S commodities and provide international food assistance.

The aim of the Nutrition Programs is to provide children and low-income people access to food, a healthful diet, and nutrition education.

In Title V the farm loan eligibility rules are relaxed to make more borrowers eligible for Federal Farm Credit assistance.

The Rural Development title provides funding for rural areas to undertake strategic planning, feasibility assessments, and coordination activities with other local, State, and Federal officials.

The Research and Related Matters title allows to reauthorize and to establish new agricultural research and extension programs.



Forestry funding is committed for a cost-share program to assist private non-industrial forest landowners in adopting sustainable forest management practices.

Finally, the Energy Program establishes new programs and grants for procurement of biobased products to support development of biorefineries, to educate the public about benefits of biodiesel fuel use and to assist eligible farmers, ranchers, and rural small businesses in purchasing renewable energy systems.

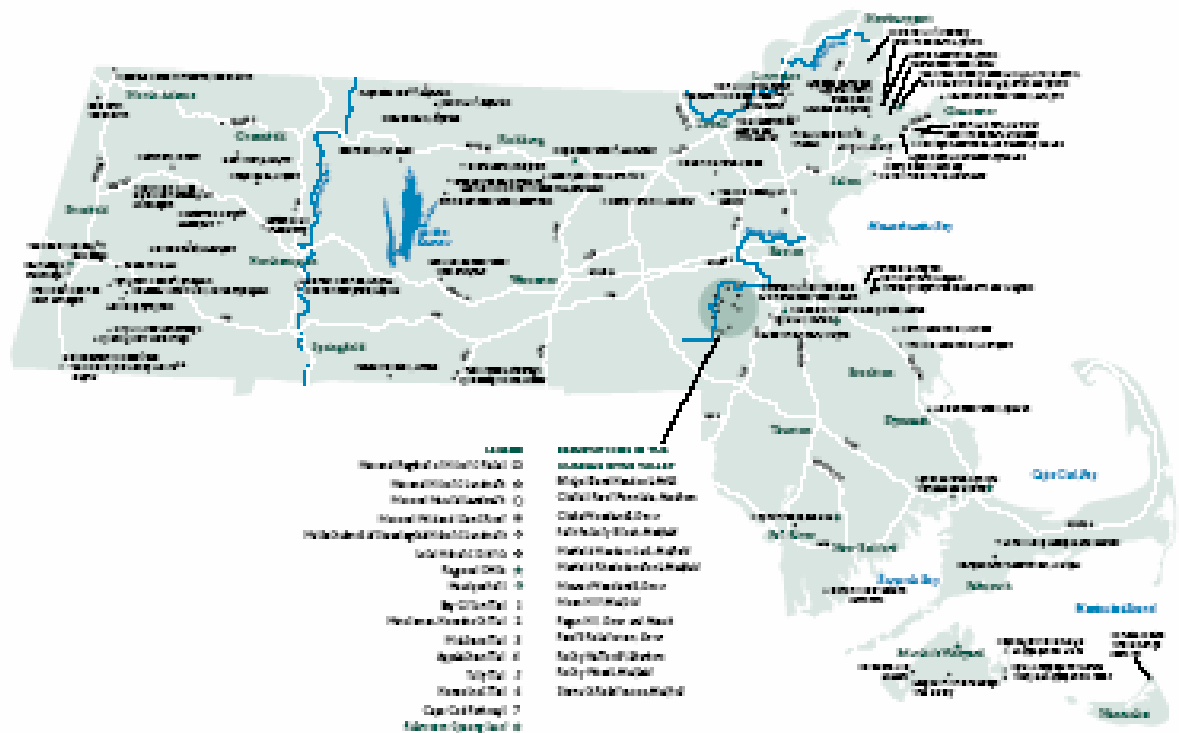
The entities eligible in the last Farm Bill are state, local governments, tribes and no governmental organizations. The lands that are able to be granted are apart from lands which contain prime unique or other productive soil, the farms and ranches with historical or archaeological resources are also eligible and incidental forest land can be included.

The E.U. Common Agricultural Policy (CAP) has followed very similar patterns since the then called European Economic Communities were established in 1951-1957. The great reform towards the unbundling of commodity price support and subsidies started in 1992. In the financial package of 2000-2006 most of the programs that run parallel to the U.S. 2002 Farm Bill were in place. The subsidiarity principle (the “federal principle” under which the member States are entitled to decide the content of policies that are better designed or implemented by the Administration which is closer to the European citizen), has allowed some member States (or Regions) to distribute the funds favoring the shift towards environmental and landscape/wildlife protection policies. The fact that some States, for example Spain, decided not to use not even parts of the funds for such policies has forced the E.U. to introduce in the 2007-2013 package minimum standards under which all the listed policies need to be put in place by each of the member States at least to a minimum degree.

Are the conservation provisions of the 2002 Farm Bill similar in the content of the programs and amount of money allocated to the 2000-2006 package? Are the U.S. 2007 Farm Bill and the E.U. 2007-2013 Package going to follow similar patterns? Would that facilitate a bilateral agreement towards a successful multilateral agreement of the Doha Round of the WTO negotiations?

#### 4.- Stewards of the land.

The Trustees of the Reservations decided to cut the deal with the Appleton family because of its interest on the preservation of the land and the environment. It is the oldest land trust of the U.S.. It has more than 120 year-round staff and is located at almost 100 locations across Massachusetts (see map below).



There are hundreds of organizations in the U.S dedicated to land conservation through different legal mechanisms. Some of them are larger than the nature protection agencies of many countries. The Nature Conservancy, for example, founded in 1951, which works closely with partners, corporations, indigenous people and traditional

communities all over the world, and has about 1 million members and supporters, works in all 50 states of the U.S. and more than 30 countries. It has protected more than 117 million acres of land and 5,000 miles of river around the world (as of September 2003, The Nature Conservancy had protected 15 million acres in the United States).

This tradition of conservation NGOs is not alien to Europe although, with the exception of British NGOs, such as the National Trust, established in 1895, their role is not comparable to the one that American NGOs play in the U.S., and even worldwide. Some of these trusts use the opportunity offered by state or federal (or supranational, in the case of the E.U.) agricultural policies to deliver new ways of ensuring land conservation. In some instances States create agencies with the special mandate to design and implement such a policy. The Scottish Natural Heritage is one of the best examples.



Courtesy of The Scottish Natural Heritage

WWF-Italy is also a rare example. This trend does not exist in Spain where land stewardship has just started. Why is it that these institutional arrangements can work in some places and seem to drag their feet on others?

### **5.- Tax credits and other incentives. Do they work? The case of Colorado**

Agriculture has become so uneconomically that sometimes State fiscal policies are extensively used to try to achieve the same ends as the USDA conservation programs.

The Main Page of this case study has introduced the reader to the Colorado tax Credit Program. The pros and cons are clearly reflected there. Does it make sense then to maintain tax credits? Is there something wrong with them? Do they simply require such an amount of money to change trends that they cannot be envisioned at all as a solution to market driven processes such as land development?

### **6.- Landscape policy**

The quest for new ideas in search of new legitimacy for environmental policies specially those that link humans with their habitat, has given birth to policies that try to go beyond the cold scientific territorial planning (classic biodiversity) to achieve the cultural connection between humans and their ecosystems. One of those policies is “landscape policy”. With some tradition in the U.S., Europe is moving quickly toward its development building on the tradition of the Council of Europe on cultural heritage. What is at the core of these new public landscape policies? What makes them different from other environmental policies? How can landscapes be categorized, evaluated and preserved? What is the public interest served by landscape protection? Are these landscape policies an alternative to biodiversity conservation policies?



## **7.- Organic cities**

The example of the Greater Boston area is not unique to the cities of the East Coast. It was not until the 1850s that the equilibrium of the largest city of the U.S. (New York), based on its close cycle economy (manure and waste channelled as fertilizer to the Brooklyn farms that fed the city) exploded. What has been called the death of the “organic city” is a more recent phenomenon for many small towns worldwide. The self-subsistency of many cities has historically been the rule and not the exception. Although returning to this recent past is almost unthinkable in a globalized society, CSA pretends to reconnect cities with its surroundings. Although the CSA experiences work well in many cases, they seem to flourish best in small towns where community building is somehow easier.

The defenders of CSA claim that the sense of community can also be built in larger areas simply by making a city look back to in history to remember a recent past in which citizen-consumers were close to citizens-producers. Some strategies include the provision by farms of a positive externality for urban dwellers via the use of farm land as open space, which provide solace and recreation which urban environments lack.

The following map of Appleton Farms trails is almost self-explanatory and self-descriptive of the benefits that its open spaces can offer to Bostonians. The Trustees of the Reservation introduce the farm to the public under the following presentation. Are these trade-offs merely anecdotal or are they the expression of attempts to rebuild a sort of, or feeling for, an organic city citizenship?

### **“Trails**

Six miles of footpaths, bridle paths, and farm roads (easy walking), some of which are part of the Bay Circuit Trail, criss-cross the farm. Visitors are asked to stay on marked paths and roads, observing which are for pedestrians and which for equestrians

### **Tours & Programs**

Interpretive tours and programs for families and adults are offered throughout the year. For listings, visit our Events Calendar or contact the Northeast Region Interpreter at 978/921-1944. [Click here to view the Family Farm Day 2006 Photos](#)

### **Literature**

Printed trail maps are distributed free from bulletin boards in parking areas. Please understand that supplies periodically run out. You may also download trail maps from this web site or mail order maps in advance of your visit.”

# Appleton Farms

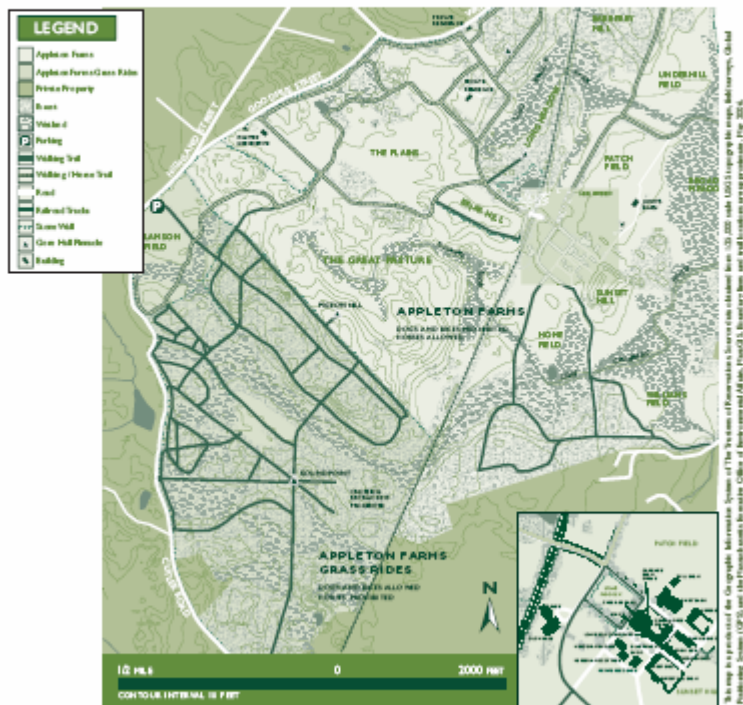
219 County Road, Ipswich, MA 01938

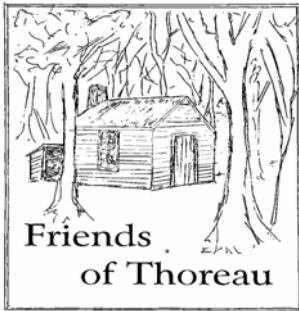


## APPLETON FARMS (658 ACRES)

Route 1A • Hamilton & Ipswich, Massachusetts  
978.356.4351 • [appletonfarms@trr.org](mailto:appletonfarms@trr.org) • [www.thetrustees.org](http://www.thetrustees.org)

A PROPERTY OF THE TRUSTEES OF RESERVATIONS





## **AGRICULTURE AND CONSERVATION: COMMUNITY SUPPORTED AGRICULTURE & OTHER ALTERNATIVES.**

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## **GUIDING STUDENTS' DISCUSSION**

### **1.- The environmental consequences of the Green Revolution.**

Modern agriculture, with its intensive farming, and use of pesticides and fertilizers has been blamed for much of the environmental disasters of the 20<sup>th</sup> Century. Rachel Carson's *Silent Spring*, one of the books which triggered the birth environmental movement in the 60s, is based on the effect of pesticides in the environment. Few books have had as much impact on late twentieth-century life as Carson's *Silent Spring*. Carson's book is one of its primary sources of what can be called the environmental consciousness of American culture.

On the other side it has been said that it was the Green Revolution what allowed for the solution of one of the most important public policies: the battle to feed humanity.

The Green Revolution was based on four elements all of which have been contested by the environmental movement: 1.- high yield crops, with plants that germinate earlier and grow quicker allowing for two or three harvests per year and the concentration of food production in the few varieties of crops that result in maximum yields; 2.- Irrigation, with the construction of dams that allow for the regulation of the supply of water; 3.- Fertilizers and pesticides, to prevent the loss of seeds and crops to diseases and pests; and 4.- Farmers' practices, that have moved the ways and means of production from traditional agriculture to intensive land use and agro-industry.

The question to explore, then, as it has been put by Bjorn Lomborg, the author of the famous book *The Skeptical Environmentalist* (1998, Chapter 5), is the following: if feeding humanity requires the continuity of the Green Revolution, what alternatives are there with more than 6 billion people on Earth? *“If we abandoned intensive cultivation and the use of pesticides, farmers would need far more space to grow the same quantities or end up producing far less food. So they would either have to take over more of the surrounding countryside or we would end up with more hungry souls among us”*.

Students should explore and further strategize alternatives that should be put in place to achieve the worldwide hunger suppression outcome of the Green Revolution to continue while its environmental impacts are minimized or, if possible, suppressed. The issue of alternatives to current pesticides and fertilizers should be explored.

A different topic is the potential disappearance of genetic diversity due to the exclusive cultivation of the varieties of crops that have more commercial potential. The wild strands are essential to maintain additional DNA that could be used to reinforce the capabilities of the plant species to combat pests but the economic incentives to grow them put in place by the development of commercially viable varieties are too big to promote the cultivation of the former, of the wild ones, by farmers.



The action in this realm is so urgent that international action has been accelerated. The students should analyse the implications and consequences of the 2001 FAO International Treaty on Plant Genetic Resources for Food and Agriculture.

## **2.- Diversified sources of income vs. intensive productivity.**

The “visit” to Appleton Farms has shown that the economic viability of its operations is based in a cluster of sources of income from different products and services. The students should identify these economic structures (Federal aid, direct consumer relations, agritourism, NGO activism...). The students should try to contact the different services as they are advertised via Appleton Farms web pages and try to sort out which are the component of the equilibrium that produces as final result the viability of agricultural activities. A farther step would consist on stimulating the students imagination and creativity by forcing them to suggest alternatives to the production processes operational at Appleton Farms or improvements on the services already provided, or the establishment of additional complementary income generating services.



Wild and modern strains of corn (Courtesy of FAO)

## **3.- Agritourism. The example of Vermont farms**

Not far from Massachusetts, farming has been an important part of Vermont’s landscape since before the arrival of European settlers, and continues to be so today. In an effort to be responsive to prevailing market conditions, many Vermont farmers are diversifying their operations in order to keep their farms profitable. One diversification opportunity that has presented itself to many Vermont farms is agritourism.

*“Agritourism is a commercial enterprise at a working farm conducted for the enjoyment, education, or active involvement of the visitor which generates supplemental income for the farm. Family farmers in Vermont are operating small bed and breakfast operations, conducting educational farm tours, hay rides, and many other agritourism activities to bring the farm experience to more people and provide additional revenue to support the farming operation”* (Agriview, June 1, 2001 Vol. 65, Number 11).

One of the networks working on these ideas is the Vermont Farms Association, founded in 1998 to provide educational opportunities about agriculture to the public. One of the major goals of the association is to sustain and further develop the working landscape that characterizes Vermont. Students should visit its official web site (<http://www.vtfarms.org/>) and analyse some of the programs of the different farms, and assess which are the different commercial niches that the farmers are exploring in order to achieve income diversification.

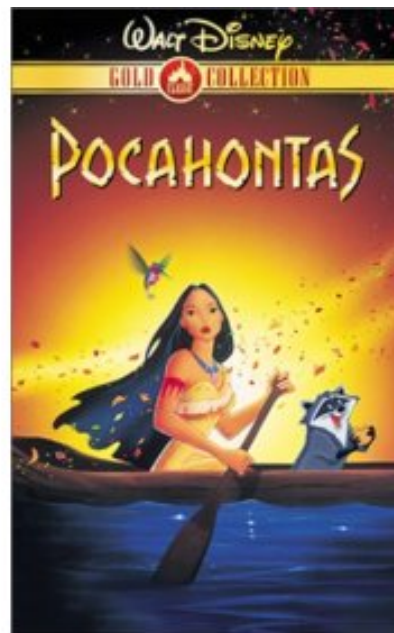
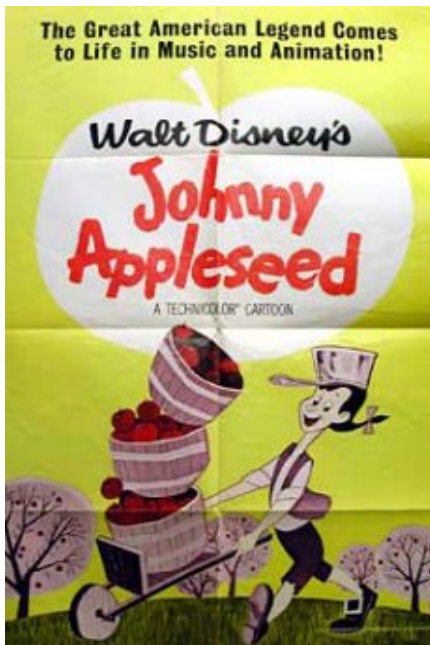


#### **4.- U.S. landscape and environment: the historical impact of agriculture on U.S. ecosystems.**

The impact of agriculture on the North American continent is a fact sometimes well documented (in particular in the case of the Great Prairies, the most affected of the U.S. pristine ecosystems), and sometimes only a consequence of rigorous research that goes deeper (see, e.g., on the impact of Mormon agricultural practices and artificial creation of a “Paradise” in Utah, Dan Flores’ *The Natural West*, Chapter 7, *Zion in Eden, Faces*

of the *Environmental History of Utah*; or, in general, for all the Great Plains, Geoff Cunfer, *On The Great Plains: Agriculture And Environment*).

The social perception of this impact is even more subtle and can be sometimes more difficult to research. One way of realizing the different attitudes of how the U.S. landscapes should be used by the European immigrants after the First Encounters is to compare two famous Disney films (after Pablo Martínez de Anguita): Johnny Appleseed and Pocahontas. Students could be exposed to short features of both films and asked about whether they perceive consistency between the ideas mystified by Disney Films in (Johnny Appleseed was originally a sequence in Disney's Melody Time, it was originally released in 1948) and years later (Pocahontas was released in 1995). Johnny Appleseed is one of America's favorite frontier heroes. Johnny planted apple trees in many states. The settlers liked him, the Indians respected him, and the animals never feared him. Johnny Appleseed—a true American legend! Subtlety was never Disney's strong point, but his message of "respect the earth" in Pocahontas is even “preachy” ([www.dvdtimes.co.uk](http://www.dvdtimes.co.uk)).

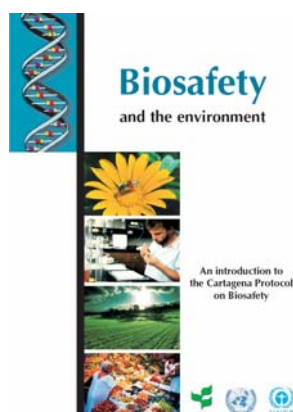


## 5.- GMOs and agriculture.

Modern agriculture in the U.S. is based in great part in the use of bioengineering. At the core of the new production process is genetic engineering which allows scientists to directly transfer functional genetic material from a species to host organisms of a different species

The U.S. (and of other countries, generally described as the Group of Miami: Argentina, Australia, Canada, Uruguay and Australia, more recently also Brazil) are very open about the absolute lack of any scientific evidence leading to idea that the consumption of GMO based food (or feed by animals) may have unhealthy effects. The European Union's approach is based on the so-called "precautionary principle": nobody can scientifically prove that consuming GMO based food will have no effects on human health on the long term, so it favours the labelling of such foods shifting the decision to consumers. Other consequences are economic: if GMO crops pollinize non-GMO based ones, the farmers that look for this market niche will suffer in their credibility and their sales.

Under the light of this scientific uncertainty students should analyze how both positions can be made compatible. One way of looking at some of these strategies that try to reach a balance between both positions is to assess the mechanisms used by the Cartagena Protocol on Biosafety.



## **5.- Food safety, agriculture and animal welfare.**

The movement for the improvement of the conditions of animals in agriculture (henstacks, livestock stables...) is in part based on the widening of animal welfare/animal rights ideology and in part motivated by food safety considerations. The mad cow crisis has been the peak of the present wave of regulations of animal farming from the perspective of animal welfare.

For example, the EU integrated approach to food safety aims to ensure a high level of food safety, animal health, animal welfare and plant health within the European Union through coherent farm-to-table measures and adequate monitoring, while ensuring the effective functioning of the internal market.

Students should explore to which extent is animal welfare directly connected *per se* with food safety.

## **6.- Cross cultural encounters: A solution for the Huerta of Valencia?**

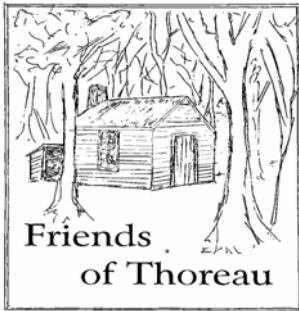
The farms surrounding the Greater Boston area are scattered along its belt. There are modern cities, though, which have more extended economic belts. One of the examples is the world famous Huerta de Valencia, once the most admired landscape of Europe, famous from Bagdad to Lisabon.

The Huerta (Orchard) has survived until very recently when after the 60s the development of the city has fragmented most of the ring. The situation is one in which the Huerta's future is doomed unless urgent planning is approved. The map below represents the areas where the Huerta crops are still operative (within the brown lines; the arrows represent current pressures to develop them), and some drawings and pictures its landscape where it is nearly as pristine as it always traditionally was.



What plan or set of measures could the students devise in order to try to save the Huerta? Are there other periurban agricultural models where saving the rural setting is a cultural identity must? Students could shop, for ideas, in the web. One possible example is the Costa Amalfitana UNESCO World Heritage site, south of Naples, and one of Italy's more charismatic places where its terraces configure a landscape that is still the heart of the economy of the region.





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## **LINKS TO ONLINE RESOURCES, WORKS CITED AND ADDITIONAL BIBLIOGRAPHY**

The main source of **information on Appleton farms** is on the web pages of the Trustees of Reservations and of the AMA program of the USDA:

[http://www.thetrustees.org/pages/249\\_appleton\\_farms.cfm](http://www.thetrustees.org/pages/249_appleton_farms.cfm)

[http://www.ma.nrcs.usda.gov/news/feature\\_Appleton\\_AMA.html](http://www.ma.nrcs.usda.gov/news/feature_Appleton_AMA.html)

**Information on Brooksby Farm** of Peabody can be found on:

[http://www.essexheritage.org/visiting/placestovisit/listofsitesbycommunity/brooksby\\_farm.shtm](http://www.essexheritage.org/visiting/placestovisit/listofsitesbycommunity/brooksby_farm.shtm)

On other sites included in the Essex National Heritage Area see:

<http://www.essexheritage.org/>

**Information on Great Brook Farm State Park** can be found in:

<http://www.mass.gov/dcr/parks/northeast/gbfm.htm>

More information on the origins and other activities of the **Trustees of Reservations** can be found on: <http://www.thetrustees.org/>

The **USDA Natural Resources Conservation Service**'s web page is:

<http://www.nrcs.usda.gov/>.

Its programs are described in: <http://www.nrcs.usda.gov/programs/>

**Harvard Forest** dioramas can be explored in:

<http://harvardforest.fas.harvard.edu/museum/dioramas.html>

There is a wonderful book published by David Foster & John O'Keefe, *New England Forests Through Time: Insights from the Harvard Forest Dioramas* (2000). A brief description of its contents can be seen at

<http://www.hup.harvard.edu/catalog/FOSNEW.html>.

The two most reliable sources on **Community-Supported Agriculture** are those of the Robyn Van En Center for CSA Resources of Wilson College; and of the Alternative Farming Systems Information Center of the USDA:

<http://www.wilson.edu/wilson/asp/content.asp?id=804>

<http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>

[see also [Annex I](#) of this Case study]

On other example of CSA in Osceola, Wisconsin, from the **community building perspective** (as well as other cases of environmental community activism related to land stewardship) see: Alix W. Hopkins, *Groundswell, Stories of Saving Places. Finding Community*, Ed The Trust for Public Land, 2005.



The web page for the activities of the **Vermont Farms** Association is:

<http://www.vtfarms.org/>

The cited analysis of **Colorado's loss of agricultural land** to urban development, which includes recommendations can be consulted in:

<http://www.environmentcolorado.org/reports/LosingGround.pdf>

The superb story of the impact of the **agricultural practices of the Mormons in Utah** is Dan Flores' *The Natural West: Environmental History in the Great Plains and Rocky Mountains*, University of Oklahoma Press (March 2003), Chapter 7: Zion in Eden, Faces of the environmental history of Utah.

On the impact of **agriculture in the Great Prairies**, see Geoff Cunfer, *On The Great Plains: Agriculture And Environment*, Texas A&M University Press (February 2005)

On **The Nature Conservancy** see: <http://www.nature.org/> The nature conservancy

On **The Scottish Natural Heritage** see: <http://www.snh.org.uk/> Scottish natural heritage

On the **death in America of the organic city** there are wonderful studies in Ted Steinberg's *Down to Earth, Nature's Role in American History*, Oxford University Press, 2002, Chapters 10 and 11.

On the environmental effects of **pesticides** and the present alternatives there are hundreds of publications. Recommended readings for an introductory level could be the following, which illustrate different positions on their impact and their future: *The Pesticide Dilemma*, Chapter 22 of Peter H. Raven & Linda R. Berg, *Environment* (John Wiley & Sons ed 4<sup>th</sup> ed, 2004). See also Chapter 22 of Bjorn Lomborg, *The Skeptical Environmentalist, Measuring the Real State of the World*, Cambridge University Press, 1998.

On the environmental effects of **fertilizers** and the present alternatives there are hundreds of publications. Recommended readings for an introductory level could be the following, which illustrate different positions on their impact and their future: Soils and their Preservation, Chapter 14 of Peter H. Raven & Linda R. Berg, Environment (John Wiley & Sons ed 4<sup>th</sup> ed, 2004), as well as the word “fertilizers” of its Index. See also Chapter 19 of Bjorn Lomborg, The Skeptical Environmentalist, Measuring the Real State of the World, Cambridge University Press, 1998.

On the **International Treaty on Plant Genetic Resources for Food and Agriculture** see <http://www.fao.org/AG/cgrfa/itpgr.htm>

On the **European Landscape Convention** see: [http://www.coe.int/t/e/Cultural\\_Cooperation/Environment/Landscape/](http://www.coe.int/t/e/Cultural_Cooperation/Environment/Landscape/). On the **European Rural Heritage** see European Conference of Ministers responsible for Regional/Spatial Planning (CEMAT), European Rural Heritage Observation Guide, 13 CEMAT (2003) 4.

On the **impact of global trade on agricultural biodiversity** see: The impact of trade liberalization on agricultural biological diversity, domestic support measures and their effects on agricultural biological diversity, CBD Technical Series no. 16, 2005. It can be downloaded from: <http://www.biodiv.org/doc/publications/cbd-ts-16.pdf>

On the terraces of the **Amalfi Coast** as UNESCO World Heritage site see: Amalfi [http://whc.unesco.org/pg.cfm?cid=31&id\\_site=830](http://whc.unesco.org/pg.cfm?cid=31&id_site=830)

On the developments in Spain and worldwide of **land stewardship**, see Carlos Javier Durá Alemañ, Reservas Naturales Privadas; Custodia del Territorio, in Enrique Alonso García & Blanca LozanoCutanda, Diccionario de Derecho Ambiental (2006), pgs 1058 ff.

The comparison of the two main passages of **Disney's** Johnny Appleseed and Pocahontas by Pablo Martínez de Anguita is part of his materials used in the class on American Environmentalism of the Master Degree on North American Studies of the University Research Institute of North American Studies of the University of Alcalá (Madrid, Spain)

On the status of **WTO negotiations** and how their success or failure may affect the 2007 Farm Bill see:

Das Bhagirath Lal, Some critical points on WTO agriculture negotiations (Nov 2005)

Chad E. Hart and John C. Beghin, Rethinking Agricultural Domestic Support under the World Trade Organization, Center for Agricultural and Rural Development, Iowa State University (Nov 2004)

Sungjoon Cho The WTO Doha Round Negotiation: Suspended Indefinitely, in ASIL Insight September 5 , 2006, Volume 10, Issue 22

Charles E. Hanrahan and Randy Schnepf, WTO Doha Round: The Agricultural Negotiations Congressional Research Service, Report for Congress September 12, 2006

On the **potential of organic food** production to supply national and global markets see: October 16, 2006. BusinessWeek's cover story The Organic Myth; Pastoral ideals are getting trampled as organic food goes mass market. An online version with comments from readers can be seen in:

[http://www.businessweek.com/magazine/content/06\\_42/b4005001.htm](http://www.businessweek.com/magazine/content/06_42/b4005001.htm)

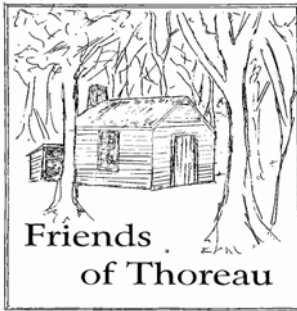
On the **U.S. position on GMO regulation** of food by the FDA and the USDA, see Emily Marden, Risk and regulation: US regulatory policy on genetically modified food and agriculture, in Boston College Law Review, May 2003.

On the notion of “**direct payments**” as a policy tool to preserve biodiversity in Africa and other places, see Paul Ferraro & Agnes Kiss, Direct Payments for Biodiversity Conservation, in Science 298 (29 November 2002), pgs. 1718-1719.

On the **history of the E.U.’s Common Agricultural Policy**:

[http://ec.europa.eu/agriculture/publi/capleaflet/cap\\_en.pdf](http://ec.europa.eu/agriculture/publi/capleaflet/cap_en.pdf)

[http://ec.europa.eu/agriculture/publi/capleaflet/cap\\_en.htm](http://ec.europa.eu/agriculture/publi/capleaflet/cap_en.htm)



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## ANNEX I



**AFSIC**

The following literature on CSA has been downloaded from the USDA AFSIC web page from where almost all of the papers and articles, if available, can be downloaded.

<http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml>

**AFSIC**'s bibliography is more extended and includes reviews and additional audiovisual material.

Community Supported Agriculture consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production. Typically, members or "shareholders" of the farm or garden pledge in advance to cover the anticipated costs of the farm operation and farmer's salary. In return, they receive shares in the farm's bounty throughout the growing season, as well as satisfaction gained from reconnecting to the land and participating directly in food production. Members also share in the risks of farming, including poor harvests due to unfavorable weather or pests. By direct sales to community members, who have provided the farmer with working capital in advance, growers receive better prices for their crops, gain some financial security, and are relieved of much of the burden of marketing.

*Basic Formula to Create Community Supported Agriculture*, by R. Van En. 80p. Robyn Van En, 1992

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