

**D R A F T**  
**ENVIROTHON PROBLEM STATEMENT**  
**SUSTAINABLE AGRICULTURE / LOCALLY GROWN**

February 2014

**BACKGROUND**

Sustainable agriculture applies the science of ecology to the practice of farming. It considers the entire environment within which a farm operates, including the need for profitability, protection and enhancement of local ecosystems, and the quality of life for farmers, farm workers, and communities. To be sustainable, a farm must generate enough revenue to maintain it over the long term. Sustainable farms use energy efficiently and help to sustain and improve soils, water quality and air quality while minimizing soil erosion and the need for petrochemical inputs. Sustainable agriculture should not be confused with organic farming.

Organic farming is the growing of crops and livestock without synthetic chemicals such as petrochemical fertilizers, pesticides, hormones, antibiotics or genetically modified organisms. Many organic farmers practice sustainable agriculture, but not all organic farms are operated sustainably. Similarly, while many sustainable farms incorporate organic farming into their programs, not all sustainable farms necessarily meet the strict standards for organic certification.

Locally grown refers to the purchase of food and other agricultural products from farms located near the point of consumption. It also refers to marketing and selling of agricultural products in communities near farms. The definition of “near” can be highly variable, depending on both the crops and the parties that are doing the buying and selling. “Near” can mean anything from right next door to a radius of 150 miles or more. Seeking out locally grown food is an attempt to decrease the fossil fuel use and carbon emissions required by long distance food delivery and increase knowledge about food and where it originates. People who eat locally grown foods are sometimes referred to as locovores! Urban farms and rural exurban farms close to cities are the usual sources of locally grown food.

Community Supported Agriculture (CSA) is a method of farm financing whereby local citizens purchase an interest or “share” in a farm’s crops early in the season. Then, as the crops mature and are harvested, the farmers distribute these products to the shareholders. This method provides the farmers with the funds needed to grow the crops early in the season, when they are most needed, and it provides shareholders with locally grown fresh produce and other agricultural products.

**SNAKE DEN FARM**

Snake Den Farm is located on Brown Avenue in Johnston, RI. It is an historic family farm and is located entirely within Snake Den State Park. The park includes 744 acres of farm and forest land. Snake Den Farm itself is a beautifully preserved 150-acre family farm and homestead that includes a farmhouse with an upstairs apartment, a large barn, and several outbuildings. Snake Den farm is owned by the Rhode Island Department of Environmental Management (RIDEM)

and is managed by the Northern Rhode Island Conservation District (NRICD). It was operated for over 125 years by members of the Dame family, who left the property to the State. Most of the buildings have been restored and the farm has served as a living museum, open to the public by appointment and dedicated to the preservation of the rural way of life, reminiscent of a time when the farmer lived in harmony with the land and its inhabitants. The Rhode Island Department of Environmental Management developed educational displays there and natural trails were provided with the aid of the Audubon Society of Rhode Island and Rhode Island Historical Farm Inc. The Dame family is no longer operating the farm and NRICD is looking for a new operator who will lease the property and put this beautiful and historic farm back into production. NRICD is particularly interested in an operator that will be capable of applying sustainable agriculture to the property and demonstrating the principals of sustainable agriculture for other local farmers and for the public.

## OBJECTIVE

Your team has been [hypothetically] invited to compete for the right to take over the farm. To win the competition you must demonstrate to the satisfaction of the judges that you understand the principals of sustainable agriculture and explain how you would apply those principals to Snake Den Farm. How would you propose to make the farm as self sustaining as possible over the long term? What actions would you propose to take to improve the soils, protect and enhance water quality and air quality, enhance wildlife habitat, and make efficient use of energy and minimizing waste?

You will probably want consider at least some of the following in developing your presentation:

1. The budget for this project is very limited and, although the lease will be provided on favorable terms, the goal is to minimize or eliminate the need for a subsidy to operate and maintain the farm. You don't need to provide an annual budget for the farm, but you'll need an agricultural program that has a good potential to make the farm profitable over the long term. What crops and/or livestock do you propose to raise, and how will you market your products to maximize revenues sustainably? Will your farm be a pick-your-own, a CSA, marketed at your own farm stand or at a local farmer's market, or will you cater to local restaurants or institutions who serve bulk food? Farm Fresh R.I. has a list of local consumers that you could contact for more information.
2. There is a demand for organically grown products locally, but the farm has not been used for organic farming in the recent past. You should consider whether or not you would propose to practice organic farming on the property and whether or not you would propose to seek "organic" certification. Be prepared to explain the reasoning behind your decision.
3. As noted above, the farm is part of a much larger state park owned by RIDEM. RIDEM maintains the park for recreation, open space, and wildlife habitat. Hunting is permitted seasonally, but is restricted to bow hunting. How might you integrate your agricultural

practices with the continued public use of the rest of the park? Public access to the farm and also to the park needs to be maintained (within limits) for recreational and educational purposes. There may also be potential conflicts with wildlife and it might be helpful to include recommendations in your presentation to help minimize those conflicts.

4. Much of the farm and the surrounding property is forested. Management of the farm woodlands will be an important part of operating the farm. Wood has long been harvested and used to provide heat on the property. Sustainable forest management might include Silviculture, or the growing of trees for production of firewood, timber, and other forest products produced for sale and for use on the farm and the use of trees as windbreaks to lessen soil erosion. Agro-forestry, like maple sugaring or production of fruit and nuts might also be an option.
5. NRICD is a non-profit organization that fosters a community-based approach to the stewardship of natural resources. Their program includes education, outreach into the communities, and technical assistance in partnership with other agencies. Your team might want to use the farm to help NRICD further its mission by teaching farmers, local residents and visitors about conservation and sustainable agriculture.
6. Some of the soils on the property are prime agricultural soils, and/or soils of state or local importance for agriculture. Other soils are considered unsuitable for farming, for road and building construction, and/or for on-site wastewater treatment systems (OWTS). How might your proposed agricultural uses relate to the soils on the Snake Den Farm property?
7. Snake Den Farm is located near the headwaters of the Pocasset River, which flows across the farm property. Are there any actions that you think would be appropriate to protect and enhance water quality and minimize the adverse effects of nutrient loading, pesticide pollution and flooding in the part of the Pocasset River that traverses the farm? )
8. Parts of the Snake Den Farm property appear to be wetlands as defined by United States and by the Rhode Island Freshwater Wetlands Act (RIGL 2-1-18 et. seq.). Alterations within these areas may be restricted in accordance with federal law, the requirements of the Rhode Island Act and the rules and regulations governing the enforcement of the Act. Although detailed wetland delineation is not required for your plan, it might be helpful to indicate generally where the wetlands are located on the property and indicate how you identified the wetland areas. What restrictions would you put on activities in these wetlands and/or what actions would you take for protection of these wetland areas.