

NJ Audubon Society and Farmers Check Differences at the Door to Produce “Innovative” Agricultural Crop

“Going out of business,” that was Jim Laine’s initial impression of the 2007 proposal developed by the New Jersey Audubon Society and the New Jersey Division of Fish and Wildlife (DFW) to establish grasslands on the 538-acre Merck Tract. The property straddling the Hunterdon and Somerset County line is part of the South Branch Wildlife Management Area, managed by the DFW, and is key to the operation of Laine Farms, run by Laine and his brother Thomas, both of whom have farmed it since the 1970’s. The plan’s first draft proposed removing a significant amount of the land on the Merck Tract from corn and soybean production and replacing it with a hay crop friendlier to grassland birds. Laine initially expressed a great deal of concern for the project which he argued “leaves no room for farming” and took these concerns to the Hunterdon County Soil Conservation Committee in 2007. Laine told the Committee that there was “not enough ground left for farming (in the plan) to make it worthwhile.”

One year removed from that initial reaction, rather than digging in their heels and fighting, NJAS and Laine Farms have chosen a different path that will make them partners rather than adversaries. This partnership, which has expanded to include two other local farmers, has been awarded a \$52,934 Conservation Innovation Grant through the U.S. Department of Agriculture. The grant will aid development of a truly “green” birdseed and directly connect the agricultural producers to a market that can take advantage of NJAS’s established customer base. To justify its “green” label, the birdseed will be grown locally through a partnership with New Jersey farmers and cultivation of the birdseed will be tied to restoration of habitat for threatened and endangered grassland birds. In addition, the partners will cooperate with the USDA’s Agricultural Research Service to evaluate the use of an experimental cultivation technique on the sunflower crop that has the potential to actually sequester carbon in the soil.

NJAS believes that its existing customer base, many of whom have purchased birdseed through its annual sale for many years, will eagerly respond to a more environmentally friendly seed. The birdseed, currently in development, provides an exciting opportunity to bring a unique product to this specialized market. The project unites the farmers and NJAS in a common goal rooted in sustaining agriculture and restoring wildlife habitat through novel approaches.

Source of Contention

When purchased in 2000, the New Jersey Green Acres Program expressed protection of habitat for wildlife of the region as one of the justifications for acquiring the Merck Tract. Recently, a group of state and non-governmental organizations known as the Raritan Piedmont Wildlife Habitat Partnership (RPWHP) have been focusing on the surrounding region of central New Jersey, specifically concentrating on critical habitat types identified by the NJ Wildlife Action Plan (NJWAP). The NJWAP singled-out grassland habitats as one of the most important features of the Hunterdon/Somerset Region and an analysis conducted by biologists from the Department of Environmental Protection’s Endangered and Nongame Species Program further identified the Merck Tract as one of the most important sites within this core grassland area for restoration. A number of partners have stepped forward to help fund the grassland restoration on the site including the Natural Resources Conservation Service, Gibson Family Foundation, Merck, Inc., Conservation Resources, Inc., the Doris Duke Charitable Foundation, and the U.S. Fish and Wildlife Service.

Yet, in addition to its potential for habitat, the Merck Tract has made up the majority of the acreage in cultivation by Laine Farms for decades. The situation at the Merck Tract poses a classic dilemma that threatens to pit farming against wildlife, one that NJAS has become all too familiar with, “It’s no different than what we are finding everywhere we are working,” says Troy Ettel, Director of Conservation and Stewardship “there is a prevailing attitude that it’s either farming or wildlife habitat and there is no middle ground. We feel very strongly that, for the sake of both agriculture and conservation in New Jersey, we have to find, or create some middle ground.”

Beginnings of a Partnership

The NJAS takes advocacy for wildlife habitat seriously – but not so seriously that it wants to see Laine Farms or any other farmers put out-of-business. As NJAS has worked closely with private landowners and farmers on grassland restoration over the past three years, it has become apparent that a more practical approach to conservation is needed. In fact, if there is one thing that NJAS has learned from its work in agricultural regions across the state, it is that farmers cannot be excluded from restoration projects; to the contrary their direct involvement is often critical to a project’s success.

The knowledge, equipment, and skills that most farmers possess are an invaluable asset, “They know how to maximize the use of equipment to get optimum results where we currently do not,” says John Parke, Stewardship

Project Director, North Region, “Also their insight on general farm operations, including actual costs to operate a farm or implement a conservation practice is invaluable.”

Similarly, after a meeting to discuss the proposed plan for the Merck Tract in 2007, Laine was willing to “try to work with the Audubon Society to find a mutually agreeable solution and avoid butting heads.” After all, “we had already been looking into what we could do to get out of growing corn, soybeans, and wheat (on the Merck Tract) due to increases in input costs,” said Laine. Escalating costs of agricultural inputs such as fuel and fertilizers costs have severely hurt farmers recently and Laine was looking for ways to reduce use of both in his farm operations. The Merck Tract is particularly drought prone, Laine added, and crop yield is often half of what you might receive on cropland elsewhere – yet input costs are the same. The interests and attitudes of both Laine Farms and NJAS and a willingness from both sides to explore alternative strategies quickly led to a discussion about how the parties might work together.

A number of novel ideas came forth, but one connection was obvious. Laine Farms operates a feed mill in Hillsborough that prepares and bags feed for livestock and wildlife. For over 20 years, one of NJAS’s major fundraisers has been an annual birdseed sale that occurs over three dates starting in September and ending in February. Almost immediately, there seemed to be a logical connection, and Laine Farms and NJAS began to discuss the possibility of New Jersey farmers growing the birdseed locally for the sale. Laine believes that viable agricultural economy is key to preservation of New Jersey farmland, “By creating a robust agricultural economy you can decrease demand for development on remaining open space. This helps sustain local communities.” Laine’s passion for agricultural sustainability and interest in the future of agriculture in NJ communities resonates strongly with NJAS’s focus on ecological sustainability and interest in the future of New Jersey’s native wildlife. Development of a locally derived agricultural product that plays to both of those interests would form a powerful partnership.

NJAS and Laine Farms began to brainstorm about how to create a product that could be marketed as “green birdseed” - truly set apart from anything else on the market. They decided that the green birdseed would need a direct link to habitat restoration, support local agriculture, and offer a product with a reduced carbon imprint.

Laine recruited two local farmers to help meet the demand that the partnership will generate and share responsibilities. Thomas Zeng, of Zeng Farms in Hunterdon County owns specialized equipment needed for harvesting sunflower seed and has experience growing it in New Jersey. Mark Kirby of Derwood Farms in Somerset County planted additional acreage and will serve as the contact for the USDA grant. The partners expect that at the end of the three-year grant period, they can offer a superior birdseed that meets all of the stated objectives of its “green” label while claiming an increased share of this niche market.

Growing a Better Birdseed

In Fall 2008, the first delivery of black-oil sunflower seed grown through the partnership will be available. It will become the first product grown under NJAS’s new ACRE (Agricultural Crops Restoring the Environment) brand and the first birdseed certified “Jersey Grown” by the New Jersey Department of Agriculture. The benefit to New Jersey agriculture of products grown under this label is easily identifiable. Jersey Grown birdseed is a superb example of this potential.

Locally grown birdseed will provide a new specialty crop and market for New Jersey farmers. NJAS sells over 40 tons of black-oil sunflower seed annually and can offer access to an attractive, stable market share for the growers. Savings from establishment of a direct, local farmer-to-market product can benefit everyone on the supply chain. The producers will receive a price above market, commodity rate, NJAS will receive a product with a lower wholesale price from the growers, and the consumer will in turn be the beneficiary of lower retail prices and a better product.

The reduced carbon imprint will be evaluated in two ways. Most patrons of NJAS birdseed purchase black-oil sunflower seed, a favorite seed of a variety of birds. Black-oil sunflower seed is predominantly grown in North and South Dakota. Creation of a local birdseed brand produced, bagged and delivered by NJ farmers has immediate environmental benefits over seed grown thousands of miles away and trucked to New Jersey. The second goes beyond just locally grown food, offering the potential to explore ways to sequester carbon in the soil while growing sunflowers for birdseed.

Modern agricultural practices put a great strain on the soil often resulting in the loss or extreme degradation of its organic layer. This organic layer includes beneficial microorganisms that enrich soil and make it more productive. The outcome is reduction in crop performance, nutrition, and productivity that must be offset with increased application of fertilizers. As part of the Carbon Char Group, LLC (CCG), Laine Farms has been experimenting with a charcoal-based soil amendment, often referred to as biochar. The CCG is made up of a team of

horticultural professionals that specialize in the production and use of carbon-based soil amendments. Experiments researching use of biochar on agricultural crops to rebuild the organic layer of the soil are occurring throughout the world. However, the experiments on the sunflower crops will differ notably from others because most trials are “based on application of several tons of biochar alone, with little regard for the biological aspects of the soil,” says Jon Nilsson, Soil Scientist with CSG. “Our project takes soil microbiology into account. That is why we call our product BIOCHAR+ because it is biochar PLUS the addition of beneficial soil microorganisms.”

Beneficial soil microorganisms can provide support needed by a plant’s roots, helping improve drainage, reduce compaction and improve nutrient cycling. “The most striking result we are seeing, where BIOCHAR+ is used correctly, is a lowering of input costs through reduced need for fertilizer,” adds Nilsson. Use of a soil amendment like BIOCHAR+ can improve crop productivity while helping growers reduce input costs. In addition, because BIOCHAR+ is carbon-based it is a key component of a process that, when added to the soil, can increase carbon sequestration levels.

The project partners will collaborate with the Agricultural Research Service of the USDA in Mandan, South Dakota to establish and analyze experimental plots on the sunflower crop. These tests will examine the changes in carbon sequestration that occur on fields where BIOCHAR+ is applied. **Quote from Kristine Nichols**

One last unique aspect to this project establishes a direct connection of the agricultural crop (sunflower seed) to habitat restoration. A fund will be created with revenue generated from increased sales of the ACRE birdseed. This fund will support related sustainable agriculture projects and habitat restoration. For every 100 acres planted to birdseed, 20 acres will be restored to grassland habitat overseen by NJAS. This habitat restoration will be supported by the USDA grant for the first three years, but after that period, this component of the project will be supported by revenues from sales.

Bird Seed Sale

Customers and NJAS members interested in this historic partnership between NJAS and New Jersey farmers can easily show their interest and support by participating in the annual birdseed sale. Information on the sale will be available at NJAS centers and at www.njaudubon.org by the middle of August. The first pick-up date for the new “Jersey Grown” birdseed will be September 27, 2008.

Customers interested in meeting the growers and touring the sunflower fields, grassland restoration sites, and the seed mill can sign up for a special tour advertised in a brochure that can be found in the seed bags.

NJAS hopes that this project might be the first of many that target practical solutions to conservation issues. “The amount of pressure on undeveloped land in New Jersey is high and the need for additional funds to preserve land as well as perform appropriate stewardship on public and private lands is great,” says Ettl. “The conservation community needs to continue to look towards atypical partnerships that utilize innovative ideas to implement conservation practices as one component of a comprehensive solution that preserves farms and wildlife habitat in New Jersey.”