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CONSERVATION Showcase

Managing a Forest for Future Generations

Geri Mason

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Nestled in the quaint Stony Creek Valley just west of the Pennsylvania State Gamelands in Dauphin County, the Snyder Property has transitioned through many land uses as it has been passed down through three generations. Currently owned by Hank and Jenny Snyder, John Thomas, Snyder's grandfather, purchased the property in 1928 and it has since remained in the family. Passed from his grandfather to his father, Raymond Snyder, Hank hopes to someday pass the land on to his two sons, Greg and Graham. His goal in practicing stewardship, by carefully managing his property, is to improve the land for the next generations.

The Ellendale Forge, which was dismantled in 1898, was located on the present Snyder property. The surrounding mountains were clear-cut to produce charcoal which fueled the Forge. When Snyder's grandfather purchased the property from the United Ice and Coal Company, who utilized the site for the commercial production of ice from the Ellendale dam, a carefully manicured apple orchard was located on many parts of the property.

As the cleared forestland was allowed to naturally revert to forestland, the species that regenerated have differed greatly. At the turn of the 20th century, the surrounding forestland grew into a mature second growth forest of oaks and hickories, which produce mast (nuts) and benefit wildlife. However, the land that was cultivated in apple orchard and later used for agriculture has had a tougher time regenerating into a diverse and productive forest. The western side of the orchard regenerated into a mature stand consisting primarily of tulip poplars from 1945 to the present; however, this section of the forest lacks the diversity of the surrounding forestland that regenerated at the turn of the century.

The eastern side of the former orchard was utilized for the production of oats and corn through the 1950s. By the time Snyder inherited the land in 1977, a thick stand of black locust trees had taken over the former agricultural field. Hank and Jenny began removing the trees and utilizing them for firewood. Within 10 years, the southern portion of the field was cleared and maintained as a meadow. This meadow is still being maintained and offers diversity and a food source for wildlife.

The southern portion of the field became overrun with a mix of invasive exotic and aggressive native species in the last 20 years. Although tulip poplars and black locusts were attempting to regenerate this portion of the field into forestland, the overwhelming presence of species, such as privet, Japanese honeysuckle, bush honeysuckle, bittersweet, Virginia creeper, poison ivy, and grapevines, were "choking" out the trees. To help address this overwhelming situation and to assist him in achieving his goals for the property, Hank sought the advice of the former Department of Conservation of Natural Resources (DCNR) Service Forester, Paul Troutman. On Troutman's recommendation, Hank hired a private Consulting Forester in the 1990s to develop a Forestry Stewardship Plan that contained evaluations of the different species and ages of forest on the property and specified unique management zones. With assistance, Hank developed a set of objectives for his forestland, which included preserving pristine forestland to benefit wildlife, enhancing biodiversity, and promoting native species, while also providing an opportunity to educate the public and allow for firewood collection. To reach this goal, each management zone contained a different set of recommendations.

Field overgrown with Aggressive Species

Scars on trees from vines “choking” saplings

Hank and Jenny have been working diligently to implement the recommendations contained in the plan with the continued support of DCNR. When the USDA Natural Resources Conservation Service (NRCS) began offering financial assistance to help fund the implementation of Forest Stewardship Plans, Andrew Brought, the current local DCNR Service Forester, provided Hank with an application for Federal funding. With the financial assistance from NRCS, Mr. Snyder hired Phillip Manning of Northeast Land Management LLC to develop and implement a Tree Planting Plan. Manning evaluated the current site conditions of the reverting field and developed an up-to-date plan including: preparation of the field for planting, selection of native species and planting density, and a three-year maintenance plan. Turning the overgrown section of field into productive, diverse forestland consisting primarily of native species would be an extensive project involving hard labor and significant financial investment.

Mr. Snyder began the arduous task of clearing the field of undesirable species in the fall of 2012 so that planting could begin in the following year. First, Snyder cleared three paths across the field to provide access for a sprayer unit mounted on a four-wheeler to apply herbicide on the unwanted vegetation. Mr. Snyder stated that when he began the work, the field “was just like a jungle,” but he persisted, and the herbicide was applied on all but a few of the native trees. By applying a mixture of glyphosate and triclopyr in the fall when the plants were preparing for dormancy, the herbicide was transported down into the root system for successful eradication. After weeks of work over the winter, the field was ready for planting in April of 2013.

Hank Snyder clearing the field.

Hardwood trees planted and protected in tree tubes.

On April 12 and 13, 1,000 native trees were planted in the cleared field. Three trails, which were seeded in grass, were marked out to provide access for future maintenance activities. Hardwood trees, consisting of red and white oaks, hickories, and poplars were planted in a random pattern between the marked trails. Clumps of conifer trees were planted amongst the many hardwoods to provide diversity and shelter for wildlife. The hardwood trees were equipped with staked tree shelters and netting, and the conifers were fenced to protect them from deer browse. Manning hopes that with the competition of the aggressive species controlled, many native trees will take root and begin growing.

Although the trees are in the ground, work still remains in ensuring their success and vitality. Manning says, "I tell landowners it is an ongoing battle. You never eradicate invasives. Seeds will blow in and take hold." His maintenance plan includes an initial inspection of the trees and spraying any encroaching vegetation in June. Thereafter, he plans on spraying any unwanted vegetation every fall for the next three years from a sprayer unit mounted on a four-wheeler. Once the trees mature and the tree tubes are removed, the thick planting density of the trees should shade out any persistent unwanted vegetation and the mature trees should be able to out compete any invasive species.

The driving force behind the regeneration of this field is to mimic the existing species in the surrounding native forest. Since native species are adapted to grow well in this environment, the chance of their establishment being a success is higher. Snyder feels that properly managing his forestland is his calling and duty. Being a good steward of his land is, for Snyder, an important aspect of "working out" his faith. "I am extremely grateful," said Hank, "for the Federal and State programs and personnel that are available to support me as I realize my goals." In pursuing this project, Hank has been careful to include his sons every step of the way. In managing forests, it often takes decades to see the results of management decisions. Since one day, he hopes, this land will continue in his family, he wants to pass along a forest that they will continue to cherish.

Even with this project not yet completed, Hank is looking toward the future and has applied for additional funding through NRCS to implement conservation practices on other management units. All private woodlot owners who desire to better manage their forestland are encouraged to apply for financial assistance for help with developing a Forest Stewardship Plan and/or implementing the recommendations contained in that plan. Contact your local NRCS office for an application or for more information.

About the author: *Geri Mason is a Soil Conservationist with the USDA NRCS in the Dauphin County Field Office. The NRCS provides conservation support and financial assistance to agriculture and forestry producers. The USDA is an Equal Opportunity provider and employer.*