Photos courtesy of farm's Facebook page

ENVIRONMENTAL BENCHMARKING

CASE STUDY: Hemlock Grove Farm

Brian Caldwell, Hemlock Grove Farm in Danby, New York grows over twenty varieties of organic apples. He also grows chestnuts and hazelnuts. His small but expanding orchard uses no herbicides and he practices strict orchard sanitation, thereby reducing the risk of pests and diseases. He currently has 3 acres of tree crops and is looking to plant more.

His knowledge is great. As a former Cooperative Extension Educator and a retired research support specialist in the Sustainable Cropping Systems Lab at Cornell, his interest in organic and natural production systems is living through Hemlock Grove's operation.

Brian's high quality apple produce operation uses an integrated system that takes considerable hand labor and produces slightly lower yields than a conventional orchard. With this in mind, he may have lower apple yields than conventionally grown fruit, but the fruit grown is certified organic by the Northeast Organic Farming Association of New York. Hemlock Grove Farms adheres to strict requirements for production practices in order to support good land stewardship while providing quality products to a regional food system. This contributes to a food system that is ecologically sound and economically viable.

Being a specialty crop grower with fewer acres has its challenges. Often, the type of crops and the size of operation may limit his ability to secure funding for conservation practices that would be incentivised to other larger, more conventional farms.

Farm Details

MUNICIPALITY:
Danby

FARM SIZE:
3 Cultivated Acres

PRODUCTS:
Apples

PRACTICES:
No Til
Reduced Tillage
Stream Bank Protection
Grass Waterways
Field Drainage by Ditches
Riparian Forest Buffers
Crop Monitoring
Double Covering Greenhouse Insulation
Insulated Buildings
Solar Electric

MOST PROUD OF:
Tree crops

Cooperative Extension
Tompkins County
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In his orchard, Brian maintains perennial vegetative cover. Unlike many orchardists who spray and mow, Brian manages the orchard floor to encourage broadleaf weeds and wildflowers that serve as habitat and food for beneficial insects, as well as pollinator species. Maintaining the diverse environment around the trees has improved soil health and promoted robust and diverse root systems. Hand thinning, fertilization using compost and compost teas, along with environmentally benign sprays to address insects and diseases, has helped create an ecosystem that considers the protection of the apple eaters and the environment. From the start he has used these "cover crops" because of their tremendous benefits, including improved soil health, water efficiency, reduction of fertilizer use, and pest control. Production risks not traditionally considered by the public include the high populations of deer and the increasing prevalence of ticks. Adequate fencing is very expensive and a major constraint for successful production and greater yields. These same constraints negatively influence the expansion of his organic fruit operation.

Hemlock Grove Farm also boasts a mature chestnut and hazelnut orchard. These woody perennials that produce nuts yearly without the annual tillage required of grains and vegetables. These nut trees are valued to be excellent ecosystem service providers that serve to reclaim and maintain degraded landscapes and sequester carbon in topsoil and plant biomass. The nuts are a valued crop as well. All in all, Hemlock Grove Farm is an oasis of ecological diversity that proves beneficial to our community.

This is one of eight case studies created as part of Cornell Cooperative Extension's 2020 Agricultural Benchmarking Study, funded through a grant by the Park Foundation. For more information or to read more studies visit our website at www.ccetompkins.org/SustainableAg or contact Graham Savio at gs695@cornell.edu

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