Photos courtesy of farm's Facebook page

ENVIRONMENTAL BENCHMARKING

CASE STUDY: Walnut Ridge Dairy

John Fleming recently sat down with us to share a little bit about the Walnut Ridge Dairy located in Lansing, NY. Farming, especially in the late summer and fall is an especially busy time as harvest is one of the major highlights to a growing season. This farm is no exception, so we value the opportunity to meet, in between these important harvest windows, to learn a little bit more about the complex business of managing the land that supports this dairy. This is considered a family dairy farm, presently made up of three families managing all aspects of the operation.

Walnut Ridge Dairy LLC (formed in 2013) was originally founded by Dave and Joan Hardie (Hardie Farms) in 1951 with 14 cows and 170 acres. Dave and Joan, first-generation farmers, did not have a farming background. But what they may have lacked in farm experience was more than made up in farm and business innovation. Dave and son, Skip, became equal partners. As the farm grew, they realized they needed to bring in outside talent…what is now a shared ownership of the farm by a few families. Steve Palladino, originally hired as a herd manager in 1984, became a partner with Hardies' in 1998. John Fleming started on the farm in 1990 and became a partner in 1999, Keith Chapin came on board in 2011, bringing with him his own herd of 450 cows. Keith became a partner in 2013 when Walnut Ridge Dairy LLC was formed. Skip is "officially" retired from the farm management, but still is active in the leadership of the operation. Today, the dairy milks approximately fifteen hundred cows three times per day. There is also the management of the non-milking heifers and the young stock. The milking parlor carousel holds sixty cows in separate stalls, each being milked simultaneously. Animals require constant management and care. Growing feed for the animals is also labor intensive and requires its own management challenges.

Livestock management is linked to high quality forages and feed that the animals consume. Corn (silage and grain)

Farm Details

MUNICIPALITY:
Lansing

FARM SIZE:
2824 Acres

PRODUCTS:
Dairy

PRACTICES:
Conservation Stewardship Program
No Till
Reduced Tillage
Cover Crops
Stream Bank Protection
Rainwater Runoff Containment System
Grass Waterways
Field Drainage by Tiles
Field Drainage by Ditches
Field Retention Ponds
Riparian Forest Buffers
GPS Tractor System/Auto-Steering
Crop Monitoring
Manure Application Rate Recording/Control
Silage Leachate Control & Mgment System
Waste Storage Facility
Pre-coolers
Variable Speed Drive for Milk Pump
High-Efficiency Lighting

MOST PROUD OF:
No till/reduced tillage with cover cropping

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and forage hays, that include alfalfa and grasses, are the main crops grown on the farm's property. Conserving soil and water management are continual priorities for the farm especially noting a changing climate with more frequent and hard rainfall events. Incorporating grass waterways, underground water run-off catch-basins and tiling help to manage the surface and subsurface water flows. A manure injection practice also helps with improved nutrient management, that allows for the field managers to account for nitrogen and phosphorus in the manure, while reducing over-the-ground runoff of extra liquid. Cover crops are also planted to improve soil health and fertility while reducing erosion. Wheat and rye are common cover crops, but triticale was used this past year as the price was significantly less. Nearly twenty-two hundred acres are managed with rotations between corn and forage crops. Managing these fields for cropping requires various key soil health practices. Generally, crop rotations are often planned at four years of corn (silage and grain) with four years of hay (alfalfa). The timing and duration of rotations may change due to seasonal weather, soil type, forage stand health and the workload on the farm.

Some of the important soil health practices that John has been proud of that the farm has implemented are no-till and reduced tillage in combination with cover cropping and nutrient management. The reduced tillage efforts were prompted because deep till methods unearthed many rocks. Picking rocks is time consuming and expensive. Less tillage means less rocks. Additionally, tractor and equipment passes are reduced thereby lessening soil compaction and erosion, as well as reduced fuel consumption, equipment use and labor costs.

Usually cover crops are planted after the corn silage acreage is harvested, but a unique inter-seeding technique was tried on the farm several years ago with some interesting benefits. After the corn was established, at about knee-high, a cover crop was planted in June. This helped cover the soil and buffered the negative impacts of seasonal drought and heavy rains. Additionally, while adding green manure, it helped to reduce erosion and allowed for good tractor wheel traction. This also showed time saving and cost benefits by not having to go in after harvest to plant another cover crop. This practice is one that John would like to implement again on more of the corn silage ground. The farm also contracts with a specialty crop consultant who helps refine the planting and seasonal management of the fields. Modern precision agriculture techniques, using computer-assisted sensors, are implemented for field navigation, soil sampling, and data analysis that allows for specific and localized seed planting rates as well as localized spray applications.

One thing is for sure, Walnut Ridge Dairy is still growing and experimenting with many ecosystem practices to benefit the farm and the community. They continually strive to improve upon the many benefits of the positive soil health practices they have adopted. Overall this farm is improving its bottom line by reducing their operating costs, tightening up their management of nutrients, being responsible water and land stewards and producing higher yields.

Each partner brings a different perspective and skill set to the farm. These varied approaches and styles are viewed as a strength for the farm's future success. Even with the differences, they share a vision about the farm's successful future and the families and community that it supports.

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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