



Forage and tillage practices that work for them

These dairymen are better farmers by making the most effective use of available land, nutrients, and cropping options.

AS ROUND Table participant Ken Van Slyke put it, "One size and one system do not fit all." While these four farms may have their own unique approach to cropping, these dairymen are willing to investigate new strategies. Those options include new ideas to maximize forage yield and quality, make the most effective use of manure nutrients, and get the most bang for the buck from capital investments in land.

Discuss corn silage and alfalfa crops.

Foresight Farms: In 2011, we planted about 400 acres of BMR (brown midrib) corn and 250 acres of conventional varieties for our dairy cow bunkers. We will raise our BMR acres to 470 acres this year. We plant 105- to 113-day maturity hybrids (to spread out harvest window) at 32,000 plants per acre. We also grow 1,500 acres of corn for grain.

For alfalfa, we have settled on Croplan's Rebound variety because of its high yield and fast regrowth. We seed 18 to 20 pounds per acre. We grow 675 acres of alfalfa.

Graywood Farms: We grew 600 acres of corn last year. Our corn varieties range from 105-day maturity for early-harvested corn up to 115-day varieties for later-harvested corn. All corn is planted in 15-inch rows at 36,000 population per acre. We have never used BMR corn but have been very satisfied with the varieties we do plant.

We plant about 10 acres of alfalfa every spring and another 20 acres in the fall for a total stand of 160 acres. A hybrid alfalfa is planted, usually a variety

that fits well with the growing conditions in our area.

Van Slyke's Dairy: We grow about 1,300 acres of short-season corn for silage. For 2011, we planted six varieties, all under 90 days RM (relative maturity). Over the 18 years that we have been planting 15-inch-row corn, we have run test plots comparing a range of maturity from 85 to 97 days. With the advancement of the shorter-season hybrids, we have been able to attain digestibility and yield that are as good as the longer-season varieties.

We do not grow any BMR varieties for two reasons. First, it should be fed as a separate commodity, for which we have no storage. Second, there are no great BMR varieties that are at, or are under 90 days RM. That said, we are considering a trial of various types of sorghum or sudangrass as a way of boosting our fiber digestibility without interfering with our agronomy scheme.

We grow 100 percent Growmark FS seeds. We plant clear-seeded alfalfa. On our well-drained gravel ground, we plant high-yielding, traffic-tolerant alfalfa varieties. On the few fields with heavier soils, we use the Mariner variety. We have good luck maintaining stands with both varieties, but the Mariner tends to thin out in about three years. We work about 800 acres of alfalfa between our own forage and some custom work.

Woldt Farms: We plant 1,150 acres of corn for silage. We plant varieties from several companies that have done well in corn plots based on milk per acre. Maturities range from 98 to 108 day, plant population is 34,500. We tried some BMR

corn silage during the last two seasons. However, we will not continue planting it due to yield drag and poor standability.

We have been planting a nonhybrid alfalfa variety. In 2012, we will plant hybrid alfalfa for the first time at a rate of 15 pounds per acre along with 5 pounds tall fescue. On some of our older alfalfa fields, we no-tilled 10 pounds of grass seed (half fescue, half festulolium) to extend stand life and give us more tonnage. We crop 1,200 acres of alfalfa and 250 acres of fescue grass.

Do you grow other forages? What about double cropping and cover crops?

Foresight Farms: In 2011, we grew 150 acres of winter rye and plan to raise this to 200 acres this year. We use winter rye as a cover crop after corn silage harvest. It is harvested in late-spring and then we seed down alfalfa. This has worked great for erosion control and manure credits. We also have planted corn back into those acres in spring. Rye is utilized as silage for our heifers. In other instances, we have seeded down rye fields with alfalfa which has worked well as long as you receive timely rains.

Graywood Farms: We grow our own rye that we harvest in summer for seed. The rye seed is planted in the fall as a cover crop and then harvested for silage in the spring. Rye is the only forage our heifers are fed and is a new addition this year.

Corn is planted in those fields after rye has been harvested. We have a very strict nutrient management plan and double cropping works



Foresight Farms — Wise and Hotvedt Families, Decorah, Iowa

"We like to take a 'walk before you run' approach to any new practice that we are going to implement on our farm," says Dave Wise. "What works on someone else's farm doesn't mean that it will work on yours."

"First, talk to someone who has successfully used the practice that you want to try (a personal visit is always best because seeing is believing)," recommends Dave when giving advice to others on forage practices. "Second, start out on a small scale on your farm. If it works . . . giv'er the gas!"

That has been some of the crop-

ping strategy employed by the trio including brothers Dave and Dick Wise and their neighbor, Dan Hotvedt, who formed Foresight Farms at Decorah, Iowa, a number of years ago after each operating separate tie stall facilities.

Today's merged farming enterprise consists of 2,700 acres of which 1,200 are owned by the LLC. The farm's 1,033 Holsteins, housed in free stalls average, 26,639 M, 898 F, 792 P, and 185,000 SCC. Shown above (1 to r) are: Ethan and Jared Wise along with their father, Dave, Dan Hotvedt, and herdsman Ben Guevara.



Graywood Farms — The Graybeal Family, Peach Bottom, Pa.

"There are so many ways to grow crops and so many different areas crops are grown," comments Byron Graybeal. "Try to keep up with the technology and ideas that are out there," he advises other farmers.

"Also, know what kind of operation you have and what you want to accomplish. Know what your costs are because that ultimately influences most of our decision making," suggests Byron when approaching cropping decision on his family's dairy operation.

Like the other Round Table herds, the Graybeals are innova-

tive farmers. They have partnered with another local business to compost manure from their dairy operation. Manure liquids and unsold compost are used as fertilizer on farm fields which grow alfalfa, corn grown for silage, and double-cropped rye.

Today's family operation is run by father Steve (shown above center), son Byron (left), and daughter Lisa (right). The farm crops 1,000 acres of which 900 are owned by the family. Graywood Farms milks 718 Holsteins that average 23,557 M, 836 F, and 690 P with 160,000 SCC.



Van Slyke Dairy — The Van Slykes, Portageville, N.Y.

“One size and one system do not fit all,” says seventh generation dairyman Ken Van Slyke. “Keep your eyes open to potential opportunities to break the mold, without forgetting what has historically worked well on your farm,” he offers to other farmers when considering future changes. “Progress and technology are great, but to be sustainable, changes must be economically viable.”

“All dairy farms should be aware of how farm profitability and sustainability depend on nutrient management and how we can maximize the great potential that lies in that other

product of dairy farming — manure.”

To that end, the Van Slykes have been separating manure for three years and use the solids for bedding. And, in 2010, they started marketing compost under the farm's trademarked name, “Bessie's Best.”

The operation is owned by Greg and Gary Van Slyke and their spouses, along with Greg's daughter Tammy, and Gary's son Ken. Shown above (l to r) are: Greg, Tammy, Ken, and Gary. The 1,280-cow herd averages 88 pounds a day with an 180,000 SCC. The operation crops 2,200 acres.



Woldt Farms — The Daryl and Amy Woldt Family, Brillion, Wis.

In addition to operating a 660-cow dairy, Woldt Farms is a partner in a bagging business, trucking enterprise, and sell TMR to local farms. In all, they run 2,700 acres.

When asked about recent innovations in the cropping enterprise, Daryl says, “Our large, water-filled land roller has eliminated any problems with rocks during harvesting of haylage,” he says. “Also, we use dump carts to harvest haylage when fields are wet. The dump carts, as opposed to semi-trucks, don't ruin alfalfa stands nearly as much and minimize soil compaction,” he says.

Last year, the Woldt's northeast Wisconsin family farm was recognized as a century farm. Daryl serves as general manager and his wife, Amy, is the financial manager. The Woldt's five daughters, (l to r) Kelsey, Kayla, Kristen, Karly, and Kourtney, are active on the farm, as well.

The herd has an 88-pound tank average and an SCC of 160,000. In August 2010, the Woldts began bedding with recycled magazine paper mixed in a 5-to-1 ratio with ag lime. The product is commercially sold as Alternative Animal Bedding.

well within that plan. We also have 170 acres of orchardgrass we grow for dry cow and heifer hay.

Van Slyke's Dairy: Two years ago, we started seeding a grass mixture on our heaviest soils. We are now up to 100 acres of this blend: perennial forage rye grass, reed canarygrass, and orchardgrass. It can be very versatile as a forage. We have harvested the grass at 12 inches tall, providing highly digestible, moderate protein feed for the milking herd. In the same year, on a proceeding cutting, we have harvested the grass at 5 to 6 feet tall to make high-fiber dry cow feed. The sod is holding up well, and it will accept a lot of our separated manure liquids.

The shorter-season corn hybrids, mentioned earlier, fit well into our agronomy scheme. It allows us to start harvesting silage early enough to get cover crops well-established in the fall, most importantly the triticale. Then, in the spring when we harvest the triticale in mid-May, we can still plant an 88-day corn for timely harvest in September.

We are very encouraged by the results from double cropping with triticale. The sugars and fiber digestibility of the triticale harvested at flag-leaf stage proved to be very valuable, and it yielded between 4.5 and 5 tons as fed. We fed the triticale as 50 percent of our hay silage DM (dry matter) from the end of May until it ran out at the end of August. The cows performed well all summer, maintaining production and reproductive efficiency. All told, the combined yield of high-quality forage on the double-cropped acres for 2011 was about 28 tons per acre.

We have been cover cropping for close to 10 years now and have experimented with many varieties and mixes of grasses. In recent years, we have settled on about half of our corn ground being covered in oats and the other half in wheat or rye. In 2010 and 2011, we reduced the wheat or rye by 200 acres to make room for the triticale. Our goal is to hit 400-plus acres of triticale in 2012. We have done field trials for our own re-

search, as well as working with Cornell University to learn as much as we can about different cover crops and what the nitrogen (N) retention and breakdown benefits are for the corn crop.

Woldt Farms: This fall, we planted 140 acres of winter rye to be harvested in spring for heifer forage. After rye, we will plant either another grass crop or seed the field down with an alfalfa/grass mix. If we have land available, we occasionally plant triticale or sudangrass. This fall, we no-tilled sudangrass after wheat on several fields. This worked the best on lighter soils.

Do you use no-till or minimum tillage?

Foresight Farms: Because of the large amount of manure we have available, we have been unable to make no-till work successfully. We do use as much minimum tillage as possible on our corn-on-corn following silage. We use a John Deere 2100 inline ripper on areas that had heavy truck traffic during the fall corn silage harvest. We have seen significant gains in yields where we have used the inline ripper.

Graywood Farms: We no-till all of our corn and have done so for several years. Until last year, all of our alfalfa was planted into tilled ground. Now, we are transitioning over to no-till alfalfa. We are predicting that transition will result in less labor and fuel costs.

Van Slyke's Dairy: We are in a strong dairy area, and we are surrounded by farms that have converted to zone tillage or strip tillage. It has its pros and cons; we are glad not to have been one of the early adopters of that technology. While the planting and fuel cost per acre with zone tillage may be lower, we just are not completely sold on zone tillage as the best way to maintain soil structure, provide weed and pest control, and yield.

There is also a challenge with making 15-inch rows work with zone tillage. Ultimately, certain conditions on corn ground and seed establishment simply dictate the proven methods of the tillage we use now.

Woldt Farms: We have done some no-till corn planting on fields with lighter soil that do not receive manure farther away from home. We were able to get the crop in sooner, save labor and fuel, and were satisfied with the results. We hire custom operators to do the no-till planting. However, the majority of our land does get manure so conventional tillage is used on those fields.

Describe seeding for small seed crops.

Foresight Farms: This process starts the year before we seed a field to alfalfa. We want to make sure the pH and fertility are at optimum levels for alfalfa production. We plant a silage-variety seed corn so that we can harvest early in the fall. Then we spread the recommended rates of lime and manure on these fields, followed by the fall seeding of winter rye. The rye is harvested the following spring (late-May to early-June) followed by another application of manure.

Seed bed prep is as follows: Double disk, field finish, roll with culti-packer, seed (18 to 20 pounds of alfalfa plus oats), and roll with culti-packer. This final trip with the culti-packer insures good seed-to-soil contact, breaks up any large lumps on the soil surface, and pushes any rocks that are sticking up, down into the soil. This provides for a very smooth surface to harvest alfalfa on for the next four years.

We have always used a cover crop when seeding alfalfa because we feel there is a quicker regrowth of root mass to help control erosion. The oatlage has also worked very well in our heifer rations (we think Roundup Ready alfalfa would be a great tool to use in this situation — erosion control with dairy quality feed and may try it).

Graywood Farms: For spring alfalfa, liquid manure is applied and then alfalfa is no-tilled into those fields. After rye is harvested for seed

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in the summer, liquid manure is applied to those fields. Then we wait for some volunteer rye to re-grow and kill it with a herbicide. Next, alfalfa is no-tilled in those fields. If we don't kill down the volunteer rye, it will choke out the alfalfa.

Van Slyke's Dairy: When we seed small seed crops, we chisel plow, and then fit the ground with a soil finishing tool that also pulls a packer wheel. Then, we blow the seed on with the air flow. The next pass is with smooth field rollers, and the final pass is with a culti-mulcher, running just the packer wheels. We mow at 16 mph, so a smooth, stone free field is essential.

Since 2009, we have used oats as a nurse crop for the grass seedings. We have had much success with this method. It allows for great weed control, quick establishment of the forage, and protection for the tender grass at the time of first harvest.

Woldt Farms: Fields are chiseled or deep tilled in fall after manure is applied. In spring, fields are worked level with a field cultivator . . . usually three passes. Then alfalfa is seeded by the co-op with an airflow machine. Next, we roll the fields with a large, smooth roller (20 feet wide) filled with water to get good seed-to-soil contact. The roller also pushes down any remaining stones that were not picked up with the skid steer and rock bucket. In 2012, a drill will be used for planting rather than the airflow machine because we want to include the fescue grass at seeding time.

Have you made any adjustments to any planting procedures?

Foresight Farms: We have been at 30-inch corn rows for over 15 years. About five years ago, we tried 15-inch rows on our silage corn to boost tons per acre. It did, and we gained about 1-1/2 to 2 tons per acre. However, we realized that we were losing some digestibility with that practice. We are now on all 30-inch rows for silage. We do reduce plant populations 10 percent from 35,000 to 32,000 for corn silage acres when compared to corn for grain.

Graywood Farms: We started planting no-till alfalfa last year and would like to stay on that program. Our farm started some no-till corn back in the 1980s and switched over to complete no-till corn in the mid-1990s. We also started experimenting with 15-inch-row corn about 10 to 12 years ago. We were happy with the results and have since planted all corn in 15-inch rows.

Van Slyke's Dairy: We started airflow seeding hay crops in the early 90s with the advent of the first airflow rigs in our area. We didn't have good luck summer seeding alfalfa the two times we tried it.

Woldt Farms: We tried planting corn in twin rows seven or eight years ago. We did not see a yield response and did not like harvesting the twin rows, so we went back to 30-inch rows.

What are your fertilizing practices?

Foresight Farms: Manure is a very important source of fertilizer and micronutrients. Generally speaking, we try to spread all of our manure on as many corn-ground acres as possible (this is for the P and K needs for 200-plus bushel corn). We spike the corn ground with 40 to 80 pounds of commercial nitrogen to balance out corn crop demands.

With this program, we are building up our P and K levels enough so that our hay ground requires very little commercial fertilizer. However, we do spread 110 pounds of gypsum and 1 pound of boron per acre on all our hay ground annually. In general, we try to avoid spreading manure directly on hay ground, as long as we have enough storage space so that we can utilize valuable nitrogen on corn.

Graywood Farms: We apply liquid manure to all our fields before planting and to our corn ground after harvest. By law, our manure has to be tested annually for N, P, and K levels. We also

have soil samples updated every three years.

The amount of commercial fertilizer applied is adjusted, depending on how much manure has been applied to each field. Using soil tests and manure samples is important to help keep fertilizer costs down.

Van Slyke's Dairy: We utilize soil tests, PSNT (nitrogen and nitrate tests), and preharvest tissue testing to give us feedback on nutrient usage and requirements. Manure is utilized to its fullest benefits whenever and wherever possible. With the implementation of our manure treatment facility, we have come closer to building a multi-item menu of manure options to use in different crops. By doing so, we have scaled back considerably on the use of commercial N and potash, to the point of using none on some fields. We have seen the benefits of using micronutrients on certain crops. Calcium and sulfur are two that have shown benefits to the soil health and yields.

The commercial fertilizers for the corn are applied after primary tillage and then incorporated. We must do that because the narrow rows do not allow for postemergence applications.

Woldt Farms: All fields are soil tested and we follow a nutrient management plan. Most fields receive manure from our dairy or from other dairy farms that we supply feed to on a contract basis. All grass fields and older alfalfa fields receive two to three applications of 6,000 to 8,000 gallons of manure. We apply the manure using semi-tankers equipped with pumps that apply a nice, even pattern across the field. If fields are too wet for trucks, the manure is applied with a dragline.

Corn fields get starter fertilizer. They also will get commercial fertilizer if needed after manure and alfalfa plow down credits are factored in, depending on the soil test. New alfalfa fields get commercial fertilizer.

When do you harvest alfalfa?

Foresight Farms: For alfalfa, we scout using a PEAQ (Predictive Equations for Alfalfa Quality) stick. We also rely heavily on our dairy consultant, Marty Faldet, to give us the "green light" on when to start cutting. For first crop, we try to stay with a 28-day cutting schedule but have cut as early as 22 to 23 days if the crop is ready and we have a window of weather.

The last couple of years, we have let the fourth cutting go longer than the 28-day schedule. Then, we have skipped the fifth crop on the acres that we are going to retain for alfalfa the next year. We feel this has enhanced the quantity of fourth crop and

next year's first crop. We have been keeping our stands four years, this includes the seeding year.

Graywood Farms: Alfalfa is harvested at late-bud or early bloom. Our first cutting is usually taken off around May 10 to 15. The rest of the cuttings of alfalfa are usually on a one-month cycle from the start of first cutting. A good alfalfa stand will last four to five years.

Van Slyke's Dairy: We use tried-and-true methods of measuring the height and evaluating budding activity in alfalfa. We also consider the cutting (first, second, and so forth) and the weather conditions. We typically stick to four cuts per year with the alfalfa. There have been some years that we could have gotten a fifth cutting but passed it up in the interest of plant reserves and maintaining the stand for the following year. We base the cutting decisions mostly on stage of maturity, with days since last harvest a secondary but still important factor.


Woldt Farms: Alfalfa stands normally last four to five years or longer if we interseed fescue into them. Tall fescue fields are harvested six times. Alfalfa fields are harvested four or five times. If we know we are close to harvest, we will begin cutting as soon as we can get in the fields following a rain to get as much done before the next rain comes.

How soon do you harvest after cutting?

Foresight Farms: We have been harvesting about 24 hours after cutting; however, with the purchase of a new merger, we hope to widen our swaths and cut dry-down substantially. Our old merger has been a bottleneck with our hay harvest. We hope to run one to two hours ahead of the chopper with the new merger.

Graywood Farms: It typically takes about 24 hours after cutting hay until it can be merged. Our Haybine has a 15-foot cut, so we merge three rows together. After merging, it is usually only a couple of hours until we chop. All of this obviously depends on the weather.

Van Slyke's Dairy: When we cut hay, we lay it in a wide swath and do not condition it. Then, we typically chop it in the windrow 6 to 18 hours after cutting, depending on the weather.

Woldt Farms: Hay is usually chopped 24 hours after cutting. Depending on the crop and the weather, it could be chopped sooner or may take longer; we like to chop haylage at 40 to 50 percent dry matter. How wide we lay the swath depends on the crop and the weather. Hay is merged when it is getting close to being dry enough to chop. Five rows are merged together. 

Do you use crop consultants?

Foresight Farms: Yes, crop consultants have helped in balancing the use of our manure resource and commercial fertilizer use. They have helped us in herbicide, insecticide, and fungicide selection and timing of application. Also, our dairy consultant, Marty Faldet of GPS Dairy Consulting, has been very helpful in assisting us with the timing of our haylage and corn silage harvest and bunker management.

We never thought we would find ourselves scouting fields with a dairy consultant. However, our nutritionist has made it very clear how important harvest timing is to get the highest quality and correct moisture levels for our haylage and corn silage. He has put a considerable amount of time and energy into making sure that this takes place. He has been a valuable asset to our dairy farm.

Graywood Farms: We do not typically use crop consultants.

Van Slyke's Dairy: We do use the consultants at Western New York Crop Management Association. David DeGolyer and his staff have been in-

strumental in our success with nutrient and pest management, CAFO reporting and planning, and farmstead planning. We work with David and one of his crop advisors, Nick Youngers. Nick also works with three of the other farms that we grow crops and sell feed to, so he is a great way to keep all of us on the same page.

They put together our annual nutrient management plan based on our manure records and crops acres. They give recommendations for fertilizers and weed control, as well as provide pre- and post-planting scouting. They perform PSNT and tissue testing, along with soil sampling and pH testing. They are also quick to offer suggestions and new ideas. We have come to rely on them heavily.

We also utilize the expertise of our local Growmark FS crop specialists. They do 100 percent of our spraying and fertilizing. They also offer advice on herbicide and agronomy programs.

Woldt Farms: We work with a crop consultant for soil testing, crop planning, nutrient management planning, and crop scouting.