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Grasslands
Services



Building Quality Wildlife Habitat Across America



NWSG

BILL MARCHEL

The nation's largest installer of native warm-season grass shares his knowledge with QDMA.

By QDMA Staff

In the last four years, native warm-season grass (NWSG) has become a hot topic in wildlife management. Though conservation groups like Pheasants Forever and many Midwestern biologists were encouraging people to re-establish native grass species long before that, the recent emergence of government incentive programs has brought NWSG into a larger spotlight. With cash incentives greasing the wheels, landowners throughout the Midwest are getting serious about converting agricultural acreage and pasture grass to native warm-season prairie species. The results are beneficial to upland game birds like quail and pheasants and a host of non-game species and songbirds. Additionally, biologists and landowners are finding that NWSG holds advantages for white-tailed deer.

When the USDA's Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA) began putting serious emphasis on NWSG four years ago, they created a need for professional installers who could plant with high success rates. Fred Circle of Ohio, owner of FDC Enterprises, was in a good position

to fill that need. Today, FDC Enterprises is the largest installer of NWSG in the country. In fact, he was a hard man to catch by phone for this interview, and only a rainy day that prevented him from riding a tractor allowed him a moment to talk. So far this spring, FDC Enterprises has planted 3,000 acres in NWSG and had 9,000 more to go when we spoke in late April.

QW: *How did you get into the NWSG business?*

Fred: I grew up in a family farm service supply business in Clark County, Ohio. Through my dad's business, I learned about respect for the land and business at the same time. In 1982, I started doing herbicide work, including specialty work in environmentally sensitive areas. When the government started to get serious about NWSG, there was a need for experienced herbicide applicators to be involved with transforming agricultural land into prairie. There was also a need for someone who could provide the large-scale production

that was necessary in Ohio to get the work done.

QW: How many states are you operating in now?

Fred: This is our fourth production season, and we're now working in four states. We're getting significant interest as far away as the Rockies and as far south as Florida.

QW: Who is planting NWSG, and what for?

Fred: Most of it has been folks who are entering into some sort of government wildlife program. NWSG can't be planted with conventional equipment with a success rate that's acceptable to the government. What we're finding is now that there are resources that can handle large-scale conversions, we're getting a lot of interest from the suburbanites who are purchasing land out in the country as a place to get away from the hustle and bustle of urban life.

We're also working with a lot of farmers. Folks in the agricultural community have an affinity toward quail and pheasants because they remember those being common when they were kids. Deer are somewhat secondary, because there are plenty of deer around, especially here in the Midwest. However, in the last few years we're seeing a lot more people wanting to manage deer and provide habitat for deer.

QW: What does NWSG do for white-tailed deer?

Fred: Three things. One is that fawn mortality drops dramatically compared to other types of cover. Foxes and coyotes generally will not go into a dense stand of NWSG. There have been a number of studies done regarding pheasant mortality in Wisconsin where they actually put collars on foxes and coyotes, and which found that they will work the outside of the NWSG, but they will not go into the middle of it.

The second thing is providing thermal cover. You can get down in those grasses after they are established, and there is no wind. In the winter, deer are looking for a refuge from the wind and the elements, and it's relatively quiet down in there. The third thing is that adult deer use NWSG as escape cover and bedding cover. It's pretty difficult to see deer in warm-season grasses because their colors blend in so well.

QW: How soon does NWSG start providing this cover?

Fred: Within 6 months of being planted, these grasses start to come alive. A lot of birds start to use them, and as it gets taller you start to see deer in them. There have been a number of folks who have called to express their pleasure at the number of animals they are seeing in those areas that we've transformed. You walk out in these stands in the morning, and you can feel that there is a lot going on around you. Just the other day we were looking at a first-year stand, and the landowner said he hadn't seen any pheasants on his farm in 40 years. While we were standing there we could hear the pheasants calling back and forth across that prairie, and that farmer couldn't believe that.



This is one of four new 30-foot grain drills used by FDC Enterprises to plant native warm-season grasses. Accurate planting depth is a must for good seed germination, and that means taking your time to avoid skips, bumps and bunches

QW: Where in the U.S. is NWSG a priority?

Fred: Just about anywhere that agriculture is widespread and good cover for wildlife is lacking. In the Midwest, it's all corn, soybeans and wheat. You go down South, and a lot of the CRP ground was put into pine trees. CRP pines provide cover at certain stages, but it's still not the kind of cover that NWSG offers, particularly for quail, and in pines there's little to eat. So, different parts of the country have different factors in play and different needs. Even urban sprawl is a big player in a lot of areas, like it is here in Ohio.

QW: What are the common mistakes made in planting and establishing NWSG?

Fred: There's a ton of mistakes you can make, but the biggest one is planting too deep. Prairie grasses evolved when there wasn't a plow, there wasn't tillage, there wasn't any way for the seeds to

QDMA and FSA to Sign Formal Agreement

The QDMA will soon become the first deer organization to sign a Memorandum of Understanding (MOU) with the United States Department of Agriculture's Farm Service Agency (FSA). This MOU will be officially signed at the QDMA's 2006 National Convention, June 22-25, in Valley Forge, Pennsylvania.

FSA administers the Conservation Reserve Program (CRP), the largest private lands program for wildlife habitat conservation in the United States.

"We are extremely pleased to enter this important partnership with FSA," said Brian Murphy, QDMA's executive director. "While many hunters recognize the value of the CRP program for upland game, it is equally important for deer in many areas."

The purpose of the MOU is to establish a framework of cooperation between FSA and QDMA relative to maintaining and enhancing the productivity of wildlife habitats on private and public lands. This agreement will allow QDMA to help guide FSA program priorities to enhance habitat for deer and all wildlife in areas where cover is limiting. Such activities include, but are not limited to, habitat conservation projects, provision of technical assistance, delivery of information and educational materials, collaboration on habitat and wildlife research and development of habitat enhancement techniques.

germinate other than falling into little cracks in the soil caused by freezing and thawing. I was raised under the premise that you plant corn 1-inches deep and soybeans a little bit less than that. If you put these NWSG seeds very deep, they will not come up. They do not have a lot of vigor. The perfect depth is a quarter inch. The tough part is hitting that precise depth, because people tend to run the grain drill as fast as they can down through the field. If that drill starts bouncing, you are missing that precise depth and your germination rate will be hurt. We have learned to go slow, and we use bigger equipment for this reason. Even if you go slow, there may be a dozen different soil types in that landscape, and you can still plant too deep or too shallow making one slow pass across a field. You really have to pay attention to what's happening under that drill all the time to keep your planting depth consistent. But there are a lot of people who want to do it all in one Saturday so they can make it to their kid's ball game, and then they're perplexed as to why it didn't come up. The second biggest reason for failure is weeds. A key component to a successful stand is keeping weed competition away from these plants when they're coming up. You are almost destined to failure if you don't incorporate a good herbicide program in the first year to two years.

QW: *What does a weed-control program involve?*

Fred: For us, it may involve good tillage practices to prepare the field followed by both pre-emergent and post-emergent herbicides. The first year we were in this, we did some plantings in old fields without herbicides, and there were failures. We decided we were going to do all of it or none of it. Now, the only establishments we do are bundled programs that include herbicide, seed, and planting. If it needs tillage, we do the tillage. Most of the time we can plant without tilling the soil, and that way we are reducing erosion. But sometimes, if it's an old hay field or pasture field, our success rates are not very good if we don't till it. There's a lot of dead material on top, and it's difficult to get good seed-to-soil contact. In the upper Midwest we have a lot of problems with goldenrod, and the roots of goldenrod exude a chemical that creates a sterilized area around the plant. If we plant right in the goldenrod the germination rate is lower, so we till that area 3 or 4 inches deep, just tear up everything on top and bury it. We won't go into old grass fields without tilling it first. It's just night and day difference in a first-year stand.

If you looked at all our failures put together, only one or two exceptions weren't old fields. You need to get a lot of sunlight to the soil surface to heat it. Warm-season grasses prosper when the ground is very warm.

QW: *What types of herbicides do you use?*

Fred: You have to use the right combination of selective herbicides, because you're often growing grasses and broadleaf forbs in your mix, and you may be fighting grasses or broadleaf weeds, or both. When we plant early in the spring we put down residual herbicides that are real good on grass competition. Residual herbicides form a barrier that will keep the weeds from germinating or kill them as they germinate. The one we use most commonly is Plateau, made by BASF. For spraying, we use a lot of 2-4,D derivatives depending on what species of weeds we're fighting. We also like to mix up the broadleaf herbicide application, and we may use three different herbicides to get us there.

QDMA , Star Seed and FDC Enterprises Form Strategic Alliance

The QDMA is proud to announce the formation of a strategic alliance with the nation's top native warm-season grass (NWSG) producer, Star Seed, and the nation's top installer of NWSG stands, FDC Enterprises. This alliance, in conjunction with the Memorandum of Understanding recently established with the Farm Services Agency (see page 53), is the result of QDMA's formal commitment to providing quality bedding, escape, thermal and fawning cover for white-tailed deer throughout the central and Midwestern United States where food is abundant but cover is limiting. One benefit of this alliance is providing QDMA members access to quality NWSG seed and quality installation service to meet their deer management objectives.

Headquartered in Beloit and Osborne Kansas, Star Seed utilizes more than 70 species of grasses and 120 species of wildflowers and forbs to customize seed blends to meet site-specific management goals. QDMA has partnered with Star Seed to create a specialized seed blend called Deer Cover. This unique mixture of grasses, legumes and wildflowers was specifically designed by biologists and agronomists to meet the cover needs of white-tailed deer. Star's "Site Specific" blending process ensures that each bag of Deer Cover purchased is perfectly suited to the area in which it will be planted.

Ohio-based FDC Enterprises was formed four years ago specifically to create wildlife habitat through NWSGs. Due to their extensive knowledge, professionalism, innovation and "Double Barrel Warranty," FDC Enterprises has rapidly become the leader in NWSG establishment, creating more than 11,000 acres of habitat last year alone. With an industry best 97 percent first-year establishment success rate, it's easy to see why FDC Enterprises is the company most used by the federal government for a variety of NWSG projects.

Based on the strengths of these companies, you can see why QDMA has formed this alliance and designated Star Seed as QDMA's preferred NWSG seed provider and FDC Enterprises as QDMA's preferred NWSG installer.

For information on Star Seed, call (800) 782-7611.
To contact FDC Enterprises, call (866) 270-4833.

Johnsongrass is a big problem in Ohio, and in the whole country for that matter. Farmers have spent years and years trying to get Johnsongrass out of their fields. Outrider is a herbicide for Johnsongrass control and has been an excellent tool for us.

Some of our seedings will get four herbicide treatments in the first year depending on the severity of the weed problem. If there's any shading from weeds, these grasses just wither and die. So, we try to get back on each one of our sites at least once a month to see if we have problems.

We try to keep the herbicides at a reasonable rate rather than the high side of the rate that's allowed by law. That stresses the plants, and we don't want to do anymore than we have to stop the weeds. If we're picking the seeding program, then we'll pick varieties of grasses that we can hit with a pretty good charge of herbicide and not stunt them.

QW: *You mentioned your early failures. How have your success rates changed since you started out?*

Fred: The first year we were in this, we planted a lot of CRP ground, and we had a 40 percent success rate. The wildlife community was okay with that, because that was the norm, but our customers were farmers who were retiring. They didn't see 40 percent as a success, and we came across looking pretty dumb.

We had to evolve, figure out what went wrong and figure out a solution. We went from 40 percent the first year to 68 percent the second year, which is an acceptable stand by NRCS standards. They've done an incredible job of putting together guidelines to help people get plants out of the ground. They're our benchmark. Last year, our third season, we planted 11,100 acres and had a 97.4 percent first-year success rate. I don't know if it will get any better than that. There are some things that just happen.

QW: *How long does it take to establish a good stand?*

Fred: The old paradigm is you try to have a decent stand of grass in 5 years, and that's where a lot of reluctance came from. People didn't want to bother with something that took so long. I took a look at it from an agribusiness standpoint, and we developed programs that get pretty good first-year results. We don't have to tell anyone to have patience for 3 to 5 years, which no one has the capacity for these days anyway.

QW: *Can you share some of your tricks for doing this?*

Fred: One thing is we buy seed exactly the opposite from the way most everybody else buys it. We buy old seed and put it in storage, and we buy new seed and put it in the ground. The germination rate of NWSG seed increases for a little while as the seed ages, so new seed has a lower germination rate. We do a lot of what's called dormant seeding, where we actually put seed in the ground in the winter. Some companies sell old seed, which has a high germination rate, and save the new seed. Well, we don't want high-germ seed in a dormant seeding because we'll have warm spikes in the winter where you have a week of weather in the 60s or 70s. That's enough to get some seed germinating, then it turns cold again and the seed dies. By putting new seed right in the ground in the winter, if we get those temperature spikes, we're not going to have a bunch of seed germinating. We take the old seed and put it in the warehouse for the winter, and we use it in the spring. As soon as it hits the soil, it will pop right out of the ground. This is not really a "trick" it's just something that makes sense if you grew up in agriculture.

We still up our seed rates when we do dormant seeding by at least 40 percent because we know we're going to have some mortality regardless of weather conditions.

QW: *What are the easiest species to establish?*

Fred: In our program, the easiest grasses are Indiangrass and big bluestem. Switchgrass is more aggressive, but it can really be stunted by herbicide. As far as forbs and wildflowers, our two favorites are partridge pea and Illinois bundleflower. They are very tolerant of herbicides, and they produce a lot of seed.

QW: *Why mix wildflowers in with the grasses?*

Fred: Deer love partridge pea. You put partridge pea in a warm-season grass field, and the deer will be there. Illinois bundleflower is a good food source for upland game birds. It creates a lot of seeds but it also attracts a lot insects.

QW: *Do NWSGs need fertilizer or lime?*

Fred: This is unscientific, but we have not seen a response from fertilizer or lime for NWSG. Understand that these grasses evolved at a time when there was no fertilizer other than what came from the back end of a bison. While we see a positive re-

sponse sometimes in more fertile soils, we think it's probably more a function of soil tilth (texture) than fertilization.

There are certain NRCS programs that require fertilization, and we do fertilize on those programs that require it.

QW: *How important is fire in keeping a stand thriving?*

Fred: It's one of the most important management tools for NWSG. It evolved to thrive with the natural fires on the Plains. When stands are burned, you get a nice rejuvenation. Fire gets rid of all that duff and lets sunlight get to the soil surface. Not every stand needs burning every year - it depends on how much growth it gets and how much dead matter it creates. If you've got a switchgrass stand, it will go downhill after 5 or 6 years if you can't put a fire across it.

The best stands you will see are those that are burned, but the irony is that not everybody can burn. In the South, you can burn without a lot of trouble. In other states the laws are different. In Ohio, we don't have fire as a tool because there is such a maze of regulations that you have to be very persistent to burn. My insurance company laughed and hung up the phone when I asked about fire insurance.

Second, there are very few people licensed to do this work. Pheasants Forever is doing a significant amount of work on a chapter-by-chapter basis, but it can still be tough to find someone to help you with this in certain areas.

QW: *What incentive programs do you recommend?*

Fred: The ones we're working with right now are Conservative Practice (CP) 2 and CP-4D. These are primarily for I pheasant and deer habitat. CP-33 is specific for quail habitat. It emphasizes shorter grasses like little bluestem, sideoats grama, and it's pretty heavy in forbs. The idea is to give the quail a shorter grass habitat in which they can maneuver. It's a field border program. Another one we work under a lot is CREP (Conservation Reserve Enhancement Program). That's a soil erosion program that's also warm-season grass habitat program.

Overall, I would recommend any of these programs. The government is paying you to take the land out of production, so the land had to be farmed in 4 of the last 6 years. That's the initial qualification. If you have land in an old CRP program, like the pine plantations in the South, those acres are eligible because it's been in a program already. So, after harvesting CRP pines, you could establish warm-season grasses on that land and be eligible to keep it enrolled.

QW: *Anything you want to add that hasn't been covered?*

Fred: We want to be the production arm to do the installation, to make the transformation, but it takes a willing landowner who is supported by a wildlife group like QDMA and a government agency that truly wants to help the landowner achieve his goals, to make all this happen. We get the accolades a lot of times because we're the ones on the tractor, but a lot of the things we have learned and applied have come from our partnerships with Townsend Chemical, BASF and Star Seed. They are as enthusiastic about what's going on here as any landowner. Then there are all the folks from the NRCS and FSA, they really stoke the engine. We're just the engine. We've just been lucky at being a little better engine than some others, but that's all a result of our team approach.