



MKZ Farms

Protected Farm Helps Improve Water Quality with Conservation Practices

Mark Zaweski is a fourth generation vegetable grower living on Long Island's East End with his wife Emilie and their three dogs. The 100 acres he's farming will always be farmland, as Mark chose to protect his land with a conservation easement almost 20 years ago. On top of that, he's taken steps to steward the land with conservation practices that help build soil health and protect water quality.

Mark has planted cover crops since he was five years old, sowing grains on his father's farm. "We've never left the ground uncovered," he says. "Unlike places like Pennsylvania, we don't have snow cover [usually] to hold that ground." In the last decade he's expanded his suite of practices to include reduced tilling and controlled-release fertilizer. When Suffolk County Cornell Cooperative Extension (CCE) bought a zone builder to lend out to farmers, Mark was one of the first to jump at the opportunity.

The zone builder only disturbs a narrow band of soil that the crop is planted into, enabling crop or cover crop residue to remain on the field's

surface as a mulch. The decreased soil disturbance is critical for maintaining the biological activity needed for well-functioning healthy soil. Excessive tillage causes soil organic matter to decompose quickly. This reduces soil aggregation resulting in surface crusting and compaction of the soil, while also decreasing beneficial

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microbial activity. Reducing tillage intensity can over time maintain or increase yields through improved soil function including nutrient uptake efficiency and water holding capacity. Those benefits also lead to improved quality of ground and surface waters.

Using the zone builder for reduced tillage has given Mark an advantage in the planting season. "You're not doing all the plowing, so it's a lot less wear and tear on equipment, and a lot less diesel fuel," Mark explains. "And there's no more discing. You're not coming

back and discing two or three times before you plant. That is definitely a time-saver."

Like many farmers, Mark isn't particularly fond of weeds. Reduced tillage makes it a bit tougher to eradicate them, but the benefits have outweighed this issue for Mark. Since he grows a lot of vine crops, he's found that plants like his kabocha squash grow right over-top of the low weeds. "You know, if my grandfather saw this he'd be rolling in his grave," Mark jokes. But jokes aside, Mark has experienced tangible results from his conservation practices, particularly on one piece

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fertilizer too. As the soil continues to improve, the benefits of the practices become even more apparent. As Mark puts it, “the healthier the soil, the less amendments you have to put into it, and the more money you save.”

Being active in the local farming community, Mark gets questions from other farmers about these practices and whether they’re worth it. “You’ve got to give it a chance,” is Mark’s response. “You can’t just do it one year and say it didn’t work.” Mark also emphasizes the value of partnering with local organizations, like Suffolk County CCE, to experiment with some guidance. “I’m always willing to try something new,” he says. “And sometimes it’s a pain, but you’ve got people like these guys who will come down and calibrate the machine for you, or come down to check things out. There’s a lot of help out there, it’s just being able to reach out and find these people.”

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of land with sandy soil that has never drained properly.

“It’s got to be clay underneath because if it rains, it’ll just pond up,” he says. “I usually don’t plant that piece, it’s just the weirdest piece of ground.” Last year, Mark took a chance on it and used the zone builder on the field. “In that

one year, just from zone building and then sub-soiling all of those centers, I didn’t have any water sitting there all year.” This meant Mark could now plant an under-utilized field with the peace of mind that wouldn’t lose his crops and nutrients on a wet year.

Mark has also been involved in an integrated pest management program with CCE’s scouting program for the last 20 years. Staff inspect the field and give the farmer a threshold for their pesticides—when to apply them and how much to use on their fields. “It’s well worth it,” Mark says. “As a sole proprietor, for me to try to be everywhere—and on top of everything—I rely on the scouting program regularly.”

Another way Mark saves time and helps protect water quality is by using Controlled Release Nitrogen Fertilizer (CRNF)—which he can implement while he’s planting, saving an extra trip over the field. Because CRNF is designed to gradually release nutrients as the plant needs them, improving nutrient uptake by the crop and reducing leaching or runoff, Mark saves on additional applications of the



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