## "Targeted Decision-Making" Josh Kamps, Extension-Lafayette County

Lafayette County has a rich history of promoting conservation efforts for many years. Since 1977, the Land Conservation Department has recognized nearly 300 farmers, educators, business leaders and non-profit organizations for their outcomes of improving soil and water quality in the county. Many targeted soil and water quality decisions are necessary to achieve these conservation outcomes.

The 2021 Lafayette County, "Conservation Farmer of the Year" is Highway Dairy Farms, the Jay and Jean Stauffacher families. Highway Dairy Farms implement best management practices, which meet the economic, environmental and socially acceptable requirements necessary for their dairy farm to remain viable. These best management practices are a series of targeted decisions to assisting with reaching a specific end goal.

Highway Dairy Farms receives the benefit of a valuable cover crop from a retired alfalfa stand. The alfalfa grows back following the final harvest in the fall and remains alive until shortly ahead of corn planting the next spring. The living alfalfa plants hold the soil with its roots, produce available N for subsequent crops and provide a reliable food source for soil microorganisms. As the stand slowly breaks down following termination, it meets a majority of the soil fertility needs of the growing corn crop. The covered soil between the rows of corn by alfalfa residue serves to reduce raindrop impact and lessen the risk of soil erosion. The residue also serves as a temperature moderator to cool the soil surface and increase soil microorganism activity. The residue also reduces the rate of weed seed germination and aids with maintaining soil moisture. Picture 1 is an example of the results of this cropping decision.

Highway Dairy Farms maintains many established field conservation practices while adding new practices. Crop rotation, contour strip cropping and grazed pastures are conservation practices from decades ago that remain on the farm today. With the addition of precision Ag, no-till planters, nutrient management and cover crop adoption, the farm adds to the impact of practices from the past with targeted decision-making for the future. Grazed pastures are a management decision, which remains despite not utilizing the feed for the farm's own dairy. The pasture ground has a financial return through rent received from a local cow/calf farmer. The pasture ground also has an environmental and social return by reducing the risk of nutrient and soil loss and sharing opportunities with area farmers. Picture 2 is an example of the many conservation practices implemented by the farm.

Highway Dairy Farms collects and stores the dairy manure produced within their milk production system. The manure nutrients are field applied according to crop production goals and soil test levels. While the many structures on the farm improve animal comfort, feed quality and nutrient retention, they also aid with improving soil and water quality. Rainwater from the cattle barn roofs and feed storage areas enter an engineered water collection system. Manure nutrients are lab analyzed, measured and entered into a SNAP+ nutrient management plan to identify the precise fields, application rate and application timing. Fall seeded cover crops like winter cereal grains, tillage radish and legumes have many soil and water quality benefits. Cover crops aid with nutrient retention, enhance soil structure with living roots and protect the soil surface from erosion. Picture 3 is an example of the many farmstead conservation practices utilized by the farm.

Adding conservation practices in the future to conservation practices of the past has proven to allow Highway Dairy Farms to remain economically, environmentally and socially viable in the dairy industry. With targeted decision-making farmers are able to achieve soil and water quality goals through conservation practice adoption. Contact a LASA farmer, County Land Conservation, NRCS or County Extension for further assistance. Watch for a video interview discussing these practices with Jay Stauffacher coming soon!

Picture 1: no-till corn planted into spring-terminated alfalfa



Picture 2: Land managed with crop rotation, contour strips and grazed pasture



Picture 3: Highway Dairy Farms

