

Intercropping Alfalfa with Corn

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John Grabber is a Research Agronomist with the USDA-Agricultural Research Service at the US Dairy Forage Research Center in Madison, Wisconsin. Much of his current research is aimed at improving forage yields and lessening environmental impacts of alfalfa-corn rotations. He grew up working on the family dairy farm in Connecticut and he received BS, MS, and PhD degrees in Plant Science and Agronomy from the University of Connecticut and the Pennsylvania State University. Prior to his current position, he worked as a Research Associate at the Miner Agricultural Research Institute, the US Dairy Forage Research Center, and the Monsanto Company.

Alfalfa and corn silage are often grown in rotation to provide forage for dairy cattle and other livestock in northern regions of the United States, but the performance of this system is hampered by low establishment year yields of spring-seeded alfalfa and excessive loss of soil and nutrients during corn silage production. Over the last decade, scientists at the USDA-Agricultural Research Service, the University of Wisconsin, and other institutions have been developing improved methods for establishing alfalfa in a corn silage companion crop. This presentation will describe how establishment of alfalfa by interseeding into corn has the potential to double first year yields of alfalfa, increase overall forage production and profitability of corn silage-alfalfa rotations, and decrease soil and nutrient loss from cropland. Key steps for choosing suitable field sites, properly amending soil, selecting suitable alfalfa varieties and corn hybrids, applying herbicides and other agrichemical treatments, and using appropriate planting and harvest management practices for this intercropping system will be discussed. Ongoing needs for research to further improve the reliability and profitability of corn-alfalfa intercropping will also be described.