

Spring Seeded Cover Crops

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Summary

Charlestown Cooperative Farm is mixed-vegetable, 150-member Community Supported Agriculture (CSA) farm in southeast Pennsylvania. Sue Kilpatrick is in charge of farm operations with the farm being owned by Liz and Bill Andersen. Sue had an interest in utilizing a spring-seeded cover crop in an approximately one acre field on the farm. Her hope was to provide added biomass and nitrogen for a subsequent planting of winter squash and pumpkins. She also had interest to actually roll this cover crop with a cover crop roller/crimper and use the mat as mulch for the squash instead of using conventional tillage. Previously this field was planted with a late spinach crop in 2006.

The spring-seeded cover crop was a mix of spring oats and Canadian field peas. We were able to purchase seed for this demonstration with funds from a Sustainable Agriculture Research and Education (SARE) Partnership Grant. The cover crop mixture was seeded in early April.

On June 10, 2007 Sue reported that the spring oats and Canadian field pea cover had not done as well as she had expected. There were several areas in the field with open canopy and a portion of the field had a high population of curly dock. However, she did report that another field on the farm (approximately 2 acres) that had been planted with hairy vetch and rye in the fall of 2006 was looking very good. On June 12, 2007 the hairy vetch/rye cover was rolled to be planted with pumpkins and sweet corn.

In looking at the field with the oats and field pea, it was decided to run 2 passes through the field to see how well the cover looked once rolled. After rolling one pass it was clear that there were some micro-topographical issues with the field with low and high spots in the field. The rigid ten-foot wide roller rode high over the ridges, preventing it from rolling/crimping plant materials in the "holes" or low areas. The result was cover crop that was minimally affected in the holes.

Suggestions were made to prepare the field for planting with a different tool to better ensure a level soil surface for rolling cover crops in the future.

The owners of the farm are interested in purchasing a roller/crimper for the CSA farm, so this demonstration was useful in their learning more about the tool and potential uses on their farm.