TCCA Extension & Research Planning Meeting

November 7, 2011

Danielle Treadwell
Associate Professor
Horticultural Sciences Dept
University of Florida, Gainesville, FL
ddtreadw@ufl.edu
352-273-4775

Improving Cover Crop Management in Agronomic and Specialty Crop Systems

Abstract. Vegetable, fruit, and row crop farming systems rely on external nutrient and pest management inputs to remain competitive. Scientific literature has established the short term benefits of cover crops but the long term ecological benefits are not fully described. Further, researchers have only minimally explored the risks and costs of cover integration in the farming system. Cover crops are an accepted practice standard by many conservation-oriented state and federal agencies, but due to the complexity of the farming system it is difficult to provide farmers with general production recommendations. Major challenges to potato and other vegetable production systems in the TCCA include nematode damage, restrictions on water use, nutrient management, and regulations on fumigant use. This project seeks to identify and minimize potential negative impacts such as unfavorable cost to benefit ratios, niche opportunities for economically important pests due to cover crops, and unnecessarily complex field operations due to the inclusion of covers in the rotation, and develop principles of management that can be modified and adopted by a wide range of producers. This work is already in progress and includes: costs of inputs and field practices, cover crop species trials, optimizing seeding rates and dates, and termination methods to achieve desired objectives and allow for a smooth transition to the income-producing crop.