

## **Status Report of Cover Crop Studies at the NDSU Dickinson Research Extension Center.**

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### **SUMMARY**

Considerable interest in cover crops exists because of the benefits to soil quality, pest suppression, and subsequent crop performance that can result when cover crops are incorporated into rotations with grain, seed, forage, and/or industrial crops. Several cover crops studies are underway at the Dickinson Research Extension Center. Hairy vetch, winter rye, and winter wheat planted alone and in cereal/legume combinations are being compared for their impact on weeds and subsequent performance of buckwheat, corn, and pinto bean after cover crops are disked, undercut, and rolled/crimped. The impact of winter rye and hairy vetch cover crops on soil biological, chemical, and physical properties, soil water content, weed growth, and subsequent crop performance is being compared in a separate study when cover crops are disked and rolled/crimped. Five spring-seeded (fababean, spring rye, spring triticale, sudangrass, and a 4-crop mixture) and five fall-seeded (Austrian winter pea, hairy vetch, winter rye, winter triticale, and a 4-crop mixture) cover crop treatments are being compared for impacts on soil water content, soil quality, and subsequent crop performance when cover crops are disked, undercut, rolled/crimped, and mowed in a third study. Buckwheat, corn, flax, dry bean, and spring wheat performance is being compared after seeding into rolled and crimped spring rye, hairy vetch, and winter rye cover crops. These four studies are ongoing and results will be reported as studies are completed, beginning in 2010.