

South Tobacco Creek Project - Organic, Inorganic Nutrient Management and Water Quality

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Abstract The South Tobacco Creek (STC) Project is located in south central Manitoba (Mb.) on the Manitoba Escarpment. The 29 mile² watershed lies west of Miami Mb., reaching 7 miles up into the escarpment, with an elevation change of approximately 600 feet. The watershed has approximately 80% of the land area under agricultural production. The majority of farm production consists of cereals; oil seeds, forages, and an expanding livestock sector. The South Tobacco Creek Project is composed of a number different ongoing studies, with research work being lead by several different agencies working together to address local, regional and national issues. Some of the key objectives for the project are: To describe and document the processes which regulate the transport of nutrients and sediments from small agricultural drainage basins in the Red River - Lake Winnipeg watershed; To measure the impacts of nutrients on the receiving aquatic ecosystems; and to develop agricultural best management practices (BMP's) which will lead to sustainable terrestrial and aquatic ecosystems. There will be 3 small watersheds (field sites) presented on the display, including: **Twin Watersheds** - This site consists of 2 sub-watersheds (fields), one managed under conventional tillage, and the other adjoining field under zero-tillage. These 2 watersheds receive only inorganic nutrients. Runoff water quality and quantity is being compared between these 2 land management practices. **Manured Watershed** - This site consists of one small watershed (field). The field is managed under conventional tillage, with all nutrients supplied through fall applied, tillage incorporated hog manure. Runoff water quality is compared to the Twin Watersheds, a non-fertilized/manured forage field, and a natural wooded area. This work is being conducted in collaboration with Manitoba Conservation, Environment Canada and Prairie Farm Rehabilitation Administration (PFRA).