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WATER BALANCE AND CORN YIELD UNDER DIFFERENT WATER TABLE MANAGEMENT SCENARIOS IN SOUTHERN QUEBEC

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ABSTRACT Corn is one of the major crops of North America. It is one of the major source of food for both humans and livestock. Water and nitrogen are two important components that affect the yield of all crops. This study looks at the total water use of the plant under different nitrogen application. Nitrogen was applied at the rate of 125, 180 and 245 kg/ha. The different water table management system maintained were water table at 60 cm from the soil surface with the help of sub-irrigation and free drainage plots with variable water table as determined only by rainfall. The soil type was sandy-loam. The study was conducted in 2008 and 2009 on a farm at Coteau-du-lac, 40 km west of Montreal.

Keywords: Water balance, Corn, Zea Mays, Water table management, Quebec.