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DRAINAGE CONTROL SYSTEMS (DCS)

VINCENT MACHABEE

Vincent Machabee, Innotag Distributions inc 1661 de l'Industrie, Beloeil (QC) J0L 2B0, Canada, vmachabee@innotag.com Tel. (450) 464-7427, Fax (450) 464-0874, Mobil (514) 292-7982, www.innotag.com

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ABSTRACT Water management in the field is a very important issue, particularly in vegetable production where shortage in water may significantly reduce crop yield and quality. Drainage control system (DCS) is a system that has been developed by Innotag to use more efficiently rainfall and drainage water. The basic principle of the system is to control the level of the water table by capillarity. It permits to maintain the water in the soil for a longer period of time and reduces the leaching of agrochemical residues. By prolonging the presence of the water table in the soil, the plant water supply occurs during a longer period of time thereby increasing the yield of the crops. In eastern Canada, more than 5000 units have been installed and yields increased from 10 to 40% in a variety of crops such as corn, soya, potatoes and market gardening. The DCS helps to maintain a suitable environment for plant growth in periods of surplus water as well as periods of drought. This permits to obtain stable yields in spite of the whims of mother nature. In periods of high rainfall, the drainage needs are met by the system, in order to insure a good yield. DCS also reduces the leaching of agrochemical residues and lower the quantity of discharged water.

Keywords: Capillarity, water table, DCS, water management, drainage control system