First Report of Soft Rot of Potatoes Caused by *Dickeya dadantii* in Zimbabwe. E. Ngadze, Department of Crop Science, University of Zimbabwe, P.O. Box Mpl67, Mount Pleasant, Harare, Zimbabwe and University of Pretoria, Department of Microbiology and Plant Pathology, Pretoria 0002, South Africa; T. A. Coutinho, Department of Microbiology and Plant Pathology, Forestry and Agricultural Institute (FABI), University of Pretoria, Pretoria 0002, South Africa; and J. E. van der Waals, Department of Microbiology and Plant Pathology, University of Pretoria, Pretoria 0002, South Africa.

A survey was carried out in the potato- *(Solarium tuberosum* L.) growing regions of Zimbabwe in April 2009 to assess the prevalence of bacterial soft rot. A total of 125 tubers with soft rot symptoms were collected. The disease caused severe economic losses ranging from 20 to 60% on tubers in the field and in storage. Affected tubers had symptoms that ranged from light vascular discoloration to complete seed piece decay. Infected tuber tissue was often cream colored and soft to the touch. In the field, plants showed severe wilting, often accompanied by a slimy, brown necrosis of the lower stems. Seventy-five of 125 isolations from diseased tubers yielded pectolytic bacteria on crystal violet pectate (CVP) medium and colonies were characterized after purification on King's B medium. All 75 isolates were gram-negative rods, oxidase negative, facultatively anaerobic, able to degrade pectate, and rot potato slices. They grew at 37°C, were sensitive to erythromycin, positive for phosphatase, indole production, cis-aconitate, lactose, D-arabinose, meso-tartrate, casein, D-melibiose, myo-inositol, and malonate utilization, while negative for acid production from trehalose, inuline, and a-methyl glucose. *Dickeya dadantii (Erwinia chrysanthemi* 3937 from the Scottish Research Institute) was included in all biochemical and pathogenicity tests. These characteristics are typical for two species, *D. zeae* and *D. dadantii* (2). Thus, the 75 isolates were further identified by PCR amplification with BOX and REP primers (3) and five isolates by *gyrB* sequence analysis (1). These analyses give support for the isolates being *D. dadantii.* Partial *gyrB* sequence analysis showed that the analyzed isolates had 96% sequence identity with the *D. dadantii* type strain Ech 586^T (GenBank Accession No. CP001836.1). One-microliter suspensions (10^8 CFU per ml) of 20 samples were injected into the stolon end of potato tubers *(S. tuberosum* L.) cv. BP1. Each isolate was inoculated into three tubers, which were maintained at 25°C. Three control tubers were inoculated with sterile distilled water. Soft rot symptoms identical to those observed in the field and in storage appeared on all inoculated tubers 1 to 2 days after inoculation but not on the control tubers. A bacterium with identical characteristics to those described above was consistently reisolated from the rotted tissue of inoculated tubers. To our knowledge, this is the first report of soft rot on potato in Zimbabwe caused by *D. dadantii,* formerly referred to as *E. chrysanthemi.* This finding has implications for import and export of potato material into and out of Zimbabwe. Zimbabwe imports seed from various countries because of the current seed shortage and exports table potatoes to other African states.

References: (1) C. Brady et al. Int. J. Syst. Evol. Micobiol. 59:2339, 2009. (2) R. Samson et al. Int. J. Syst. Evol. Microbiol. 55:1415, 2005. (3) J. Versalovic et al. 1991. Nucleic Acids Res. 19:6823,1991.