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(71) Applicant *(for all designated States except US)*: **SES EUROPE N.V./S.A.** [BE/BE]; Industriepark 15, B-3300 Tienen (BE).

(71) Applicant *(for MG only)*: **ADVANTA USA, INC.** [US/US]; 2369 - 330th Street, P.O. Box 500, Slater, IA 50244 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WEYNES, Guy** [BE/BE]; Dwersbos 25, B-1650 Beersel (BE). **LATHOUWERS, Jean** [BE/BE]; Vilvoordelaan 50, B-1830 Machen (BE). **VAN DUN, Kees** [NL/NL]; Rijk Zwaan Nederland BV, Postbus 40, NL-2678 ZG De Lier (NL).

(74) Agent: **REWOLDT, Dana, S.**; Advanta USA, Inc., 2369 - 330th Street, P.O. Box 500, Slater, IA 50244 (US).

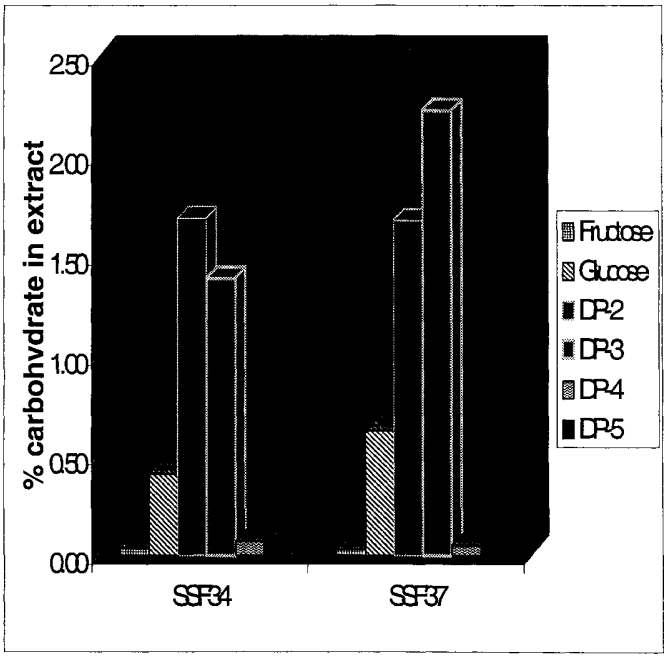
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(54) Title: DOUBLE FRUCTAN BEETS



(57) Abstract: The present invention is in the field of fructan producing plants. Furthermore the present invention is directed to the production of at least 3 degree of polymermization. Additionally, the present invention is more specifically directed to non fructan producing plant which are transformed or crossed to contain at least two genes of the three fructosyltransferase.

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International application No.
PCT/US02/19860

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12N 15/82, 15/29, 15/31, 15/54; C12P 19/04.
US CL : 800/284, 287, 288, 295, 298, 320, 320.1; 435/69.7, 69.8, 101, 193, 468; 536/23.4, 23.6, 23.7, 24.1.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 800/284, 287, 288, 295, 298, 320, 320.1; 435/69.7, 69.8, 101, 193, 468; 536/23.4, 23.6, 23.7, 24.1.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
West, STN

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98/39460 A1 (MAX-PLANCK-GESELLSCAFT ZUR WISSENSCHAFTEN E. V.) 11 September 1998 (11.09.98). Entire document.	1-18.
Y	WO 99/54480 AI (CENTRUM VOOR PLANTENVEREDELINGS-EN REPRODUKTIEONDERZOEK) 28 October 1998 (28.10.99). Entire document.	1-18.
Y	WO 99/46395 A1 (E.I. DU PONT DE NEMOURS AND COMPANY) 16 September 1999 (16.09.99) Entire document.	1-18.
Y	US 5,986, 173 A1 (SMEEKENS, et al) 16 November 1999 (16.11.1999). Entire document.	1-18
Y	US 6,025,542 A (SMEEKENS, et al) 15 February 2000 (15.02.2000). Entire document.	1-18.
Y	US 6,057,494 A (KOOPS, et al) 02 May 2000 (02.05.2000). Entire document.	1-18
Y	SMEEKENS, et al. Fructans and fructan accumulating transgenic plants. Journal of Cellular Biochemistry Supplement, 1994, Vol. 0, No 18 PART A, page 84. Entire document.	1-18
Y	EBSKAMP, et al. Fructan accumulation in transgenic plants. Journal of Cellular Biochemistry Supplement, 1994, Vol. 0, No. 18 PART A, page 119. Entire document.	1-18

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Box PCT
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Authorized officer
Georgia Helmer
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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	VAN DER MEER, et al. Cloning of the fructan biosynthesis pathway of Jerusalem artichoke. Plant Journal, 1998, Vol. 15, No. 4, pages 489-500. Entire document.	1-18
Y	HELLWEGE, et al. Transgenic potato (Solanum tuberosum) tubers synthesize the full spectrum of inulin molecules naturally occurring in globe artichoke (Cynara scolymus) roots. Proc. Nat. Acad. Sci., 18 July 2000, Vol. 97, No. 15, pages 8699-8704. Entire document.	1-18
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Y	SEVENIER, et al. High level fructan accumualtion in a transgenic sugar beet. Nature Biotechnology, 1998, Vol. 16, No. 9, pages 843-846. Entire document.	1-18
Y	VIJN, et al. Cloning of sucrose:sucrose 1-fructosyltransferase from onion and synthesis of structurally defined fructan molecules from sucrose. Plant Physiology, 1998, Vol. 117, No. 4, pages 1507-1513. Entire document.	1-18
Y	VAN DER MEER, et al. Fructan as a new carbohydrate sink in transgenic potato plants. The Plant Cell, April 1994, Vol 6, No 4, pages 561-570. Entire document.	1-18
Y	RUFF, et al. Production of fructan in plants by expression of a bacterial fructan polymerase. Plant Physiology, 1994, Vol. 105, N. 1 SUPPL, page 116. Entire document.	1-18