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(21) International Application Number: PCT/US97/17600 (22) International Filing Date: <u>24 September 1997 (24.09.97)</u> (30) Priority Data: <u>08/718,905</u>, <u>24 September 1996 (24.09.96)</u> US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 08/718,905 (CIP) Filed on 24 September 1996 (24.09.96) (71) Applicant (for all designated States except US): ECOGEN, INC. [US/US]; 2005 Cabot Boulevard West, Langhorne, PA 19047-3023 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): DONOVAN, William, P. [US/US]; 36 Calicobush Road, Levittown, PA 19057 (US). DONOVAN, Judith, G. [US/US]; 36 Calicobush Road, Levittown, PA 19057 (US). SLANEY, Annette, C. [US/US]; 4 Dunmoor Court South, Hamilton Square, NJ 08690 (US). (74) Agent: KITCHELL, Barbara, S.; Arnold, White & Durkee, P.O. Box 4433, Houston, TX 77210 (US).	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(54) Title: <i>BACILLUS THURINGIENSIS</i> CRYET33 AND CRYET34 COMPOSITIONS AND USES THEREFOR (57) Abstract Disclosed are <i>Bacillus thuringiensis</i> strains comprising novel crystal proteins which exhibit insecticidal activity against coleopteran insects including red flour beetle larvae (<i>Tribolium castaneum</i>) and Japanese beetle larvae (<i>Popillia japonica</i>). Also disclosed are novel <i>B. thuringiensis</i> crystal toxin genes, designated <i>cryET33</i> and <i>cryET34</i>, which encode the coleopteran-toxic crystal proteins, CryET33 (29-kDa) crystal protein, and the <i>cryET34</i> gene encodes the 14-kDa CryET34 crystal protein. The CryET33 and CryET34 crystal proteins are toxic to red flour beetle larvae and Japanese beetle larvae. Also disclosed are methods of making and using transgenic cells comprising the novel nucleic acid sequences of the invention.		