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- (81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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(54) **Title:** USE OF SURFACTANTS FOR MITIGATING DAMAGE TO PLANTS FROM PESTS

(57) **Abstract:** A method is described for treating soil to increase plant growth or improve the health of plants, wherein an aqueous solution of polyethoxylated fatty acids and/or fatty alcohols is used which has pesticidal effects. In some embodiments, the method can be used against soil pests such as at least one of nematodes, soil-dwelling insects, and weeds. The invention also pertains to methods for applying bio-derived surfactants to crops and other plants or to the soil used for such plants in order to reduce the need to apply environmentally unfriendly pesticides substances.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 09/00259

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A01N 61/00, 65/00 (2009.01)

USPC - 504/116.1, 117, 118

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)
504/116.1, 117, 118

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)

PubWEST(USPT,PGPB,EPAB,JPAB); DialogPRO(Engineering); Google Scholar

Search Terms: neamticidal/pesticide/insecticide, surfactant, fatty acid, lipid, water, oil, ethoxylation, HLB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 6,200,961 B1 (Kostka et al.) 13 Mar 2001 (13.03.2001), entire document	1-6, 8-10 and 15-41 ----- 7 and 11-14
Y	US 5,525,576 A (Medina-Vega et al.) 11 Jun 1996 (11.06.1996), entire document especially Example 10 and Abstract	7
Y	US 4,624,070 A (Query et al.) 25 Nov 1986 (25.11.1986), entire document especially Abstract and col 2, ln 25-40	11-14

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

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