



- (51) **International Patent Classification:**  
*A01H 5/00* (2006.01) *C12N 15/82* (2006.01)
- (21) **International Application Number:**  
PCT/US2012/034503
- (22) **International Filing Date:**  
20 April 2012 (20.04.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
61/479,533 27 April 2011 (27.04.2011) US
- (71) **Applicant (for all designated States except US):** **DOW AGROSCIENCES LLC** [US/US]; 9330 Zionsville Road, Indianapolis, Indiana 46268 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **RICHBURG, John, S.** [US/US]; 102 Kimberly Street, Headland, Alabama 36345 (US). **WRIGHT, Terry, R.** [US/US]; 14162 Charity Chase Circle, Westfield, Indiana 46074 (US). **BRAXTON, Leon, B.** [US/US]; 1090 Jackson Grove Road, Travelers Rest, South Carolina 29690 (US). **ROBINSON, Andrew, E.** [US/US]; 7623 Hickory Road, Brownsburg, Indiana 46112 (US).
- (74) **Agent:** **CATAXINOS, Edgar, R.;** TraskBritt, P.O. Box 2550, Salt Lake City, Utah 84110 (US).
- (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, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

**Published:**

- *with international search report (Art. 21(3))*

(88) **Date of publication of the international search report:**

21 March 2013



WO 2012/148818 A3

(54) **Title:** METHOD FOR CONTROLLING WEEDS IN A FIELD OF COTTON PLANTS

(57) **Abstract:** The present invention relates to a method of controlling undesirable vegetation in a field containing an auxin herbicide resistant cotton crop by applying to the location where control is desired a mixture of an effective amount of 2,4 DB and an effective amount of glufosinate.

**A. CLASSIFICATION OF SUBJECT MATTER***A01H 5/00(2006.01)i, C12N 15/82(2006.01)i*

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)

A01H 5/00; C12N 15/82; C12N 15/52; A01N 39/02; A01N 43/40

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: herbicide-resistant cotton crop, 2,4-DB, glufosinate, 2,4-D, transgenic cotton, AAD-1, AAD-12

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 2008-0119361 A1 (FENG PAUL C.C. et al.) 22 May 2008 See paragraphs [0019]-[0020], [0022]-[0023]	1, 15, 16 5, 7-14 2-4, 6
Y A	US 7838733 B2 (WRIGHT TERRY et al.) 23 November 2010 See abstract, claims 1, 3, 5-7, 10-13, 16-17, 20-22, 24, 28, 30, 33, 38, 55 and column 1 20 line 25- column 121 line	5, 7-14 1-4, 15, 16
A	WO 2007-053482 A2 (DOW AGROSCIENCES LLC et al.) 10 May 2007 See abstract, claims 1, 4, 8, 10-11, 15-18, 24-27, 45-46, 48-49, 53-54, 70-72, 82, 87 and paragraph [00384]	1-16
A	US 2010-0323893 A1 (IKEDA HAJIME) 23 December 2010 See claims 1, 5-6; paragraphs [0042]-[0044], [0060]-[0061], [0073]-[0075]	1-16

 Further documents are listed in the continuation of Box C. See patent family annex.

\* 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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

23 NOVEMBER 2012 (23.11.2012)

Date of mailing of the international search report

**28 NOVEMBER 2012 (28.11.2012)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan  
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, HYUNG GON

Telephone No. 82-42-481-8133



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2012/034503**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0119361 A1	22.05.2008	AU 2007-256618 A1 CA 2653739 A1 CN 101500421 A EP 2023719 A2 MX 2008015743 A US 7855326 B2 WO 2007-143690 A2	13.12.2007 13.12.2007 05.08.2009 18.02.2009 13.02.2009 21.12.2010 13.12.2007
US 7838733 B2	23.11.2010	AR048724A1 AU 2005-240045 A1 BR P10509460A CA 2563206 A1 CN 1984558 A EP 1740039 A2 JP 2007-535327 A MX PA06012634A NZ550602A US 2009-0093366 A1 WO 2005-107437 A2 ZA200608610A	17.05.2006 17.11.2005 04.09.2007 17.11.2005 20.06.2007 10.01.2007 06.12.2007 08.02.2007 27.11.2009 09.04.2009 17.11.2005 30.07.2008
WO 2007-053482 A2	10.05.2007	AR056590A1 AU 2006-308959 A1 CA 2628263 A1 CN 101553111 A EP 1947926 A2 JP 2009-513139 A WO 2007-053482 A3 ZA200803982A	10.10.2007 10.05.2007 10.05.2007 07.10.2009 30.07.2008 02.04.2009 10.05.2007 25.02.2009
US 2010-0323893 A1	23.12.2010	None	