

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PCT00768	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2018/055716	International filing date (<i>day/month/year</i>) 31 July 2018	(Earliest) Priority Date (<i>day/month/year</i>) 08 August 2017
Applicant UPL LTD		
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau. This international search report consists of a total of 7 sheets. ☐ It is also accompanied by a copy of each prior art document cited in this report.		
1. Basis of the report a. With regard to the language, the international search was carried out on the basis of: ☒ The international application in the language in which it was filed. ☐ A translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)). b. ☐ This international search report has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)). c. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I. 2. ☐ Certain claims were found unsearchable (See Box No. II). 3. ☒ Unity of invention is lacking (See Box No. III). 4. With regard to the title, ☒ the text is approved as submitted by the applicant. ☐ the text has been established by this Authority to read as follows: 5. With regard to the abstract, ☒ the text is approved as submitted by the applicant. ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority. 6. With regard to the drawings, a. the figure of the drawings to be published with the abstract is Figure No. ☐ as suggested by the applicant. ☐ as selected by this Authority, because the applicant failed to suggest a figure. ☐ as selected by this Authority, because this figure better characterizes the invention. b. ☐ none of the figures is to be published with the abstract.		

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
the subject matter listed in Rule 39 on which, under Article 17(2)(a)(i), an international search is not required to be carried out, including
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Supplemental Box for Details

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

 International application No.
PCT/IB2018/055716

A. CLASSIFICATION OF SUBJECT MATTER

A01N 39/04 (2006.01) A01N 47/36 (2006.01) A01N 43/40 (2006.01) A01P 13/00 (2006.01)

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)

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)

Classification symbols - A01N39/04, A01N47/36, A01N43/40

Databases - CAPLUS, REGISTRY, BIOSIS, CABA, EMBASE, INFULL, KRFULL, JPFULL, CNFULL, GOOGLE, GOOGLE SCHOLAR, GOOGLE PATENT, logical database - PATENW

Keywords - Synthetic Auxin herbicides, ALS inhibitor herbicides, picloram, metsulfulam, 2,4-D, herbicides, synergy, combinations, ternary, TORDON 75-D and like terms

Applicant/Inventor Search UPL LTD, BRITO, DE ALMEIDA, SILVA, DA CUNHA, HOHMANN, GONCALVES, DECARO JUNIOR, SHROFF.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	



Further documents are listed in the continuation of Box C



See patent family annex

* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier application or patent but published on or after the international filing date	"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
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 26 September 2018	Date of mailing of the international search report 26 September 2018
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustalia.gov.au	Authorised officer Karl Heys AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. +61262832725

INTERNATIONAL SEARCH REPORT		International application No.
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		PCT/IB2018/055716
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Herbguide combination 'Metsulfuron 200 plus Picloram 240' [retrieved from internet on 21 September 2018] <URL:http://www.herbguide.com.au/Descriptions/hg_Metsulfuron_200_plus_Picloram_240.htm> published on 26 August 2011 as per Wayback Machine. top of page as cited prior to 3	1-11
X	CIMARRON MAX herbicide, BAYER, [retrieved from internet on 17 September 2018] <URL:https://www.backedbybayer.com/~media/BackedByBayer/Product%20Labels%20-%20pdf/Cimarron%20Max.ashx> published on 05 December 2015 as per Wayback Machine. page 1 of document.	1-4 & 6-8
X	US 2014/0256552 A1 (DOW AGROSCIENCES LLC) 11 September 2014 Whole of document but especially Abstract, claims, paragraphs [0030] & [0032]-[0038]	1-4 & 6-8
X	US 2011/0092366 A1 (GRIVEAU et al.) 21 April 2011 Abstract, claims, table 2	1-4, 6-8
X	CN 104542663 A (JIANGXI ZHONGXUN AGROCHEMICAL CO LTD) 29 April 2015 Abstract, claims, examples	1-4, 6-8
X	CN 106472529 A (SICHUAN LIER CROP SCIENCES CO LTD) 08 March 2017 Abstract, exemplified	1-4 & 6-7.
X	HUMPHRYS, M. et al. 'Control options for Rubber Bush' DEPARTMENT OF LAND RESOURCE MANAGEMENT, Northern Territory Government [retrieved from internet on 17 September 2018] <https://denr.nt.gov.au/__data/assets/pdf_file/0006/257991/control-options-rubber-bush.pdf> published on 09 March 2017 as per Wayback Machine. results -point 4, table 1	1-4 & 6-7.
X	Tordon 75-D herbicide Label, DOW AGROSCIENCES LLC [retrieved from internet on 21 September 2018] <URL:http://www.dowagro.com/en-au/australia/product_finder/herbicides/tordon-75d> published on 24 January 2016 as per Wayback Machine. page 1	9-10
Form PCT/ISA/210 (fifth sheet) (January 2015)		

Supplemental Box**Continuation of: Box III**

This International Application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept.

This Authority has found that there are different inventions based on the following features that separate the claims into distinct groups:

- Claims 1-8 & 10-11 is directed to an at least 3 part herbicidal combination comprising 2 synthetic auxin herbicides and an ALS inhibitor herbicide. The feature of a ternary combination containing 2 auxin herbicides and at least one ALS inhibitor is specific to this group of claims.
- Claims 9 is directed to a binary herbicidal combination. The feature of this combination comprising picloram ammonium salt and 2,4-D ammonium salt is specific to this group of claims

PCT Rule 13.2, first sentence, states that unity of invention is only fulfilled when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. PCT Rule 13.2, second sentence, defines a special technical feature as a feature which makes a contribution over the prior art.

When there is no special technical feature common to all the claimed inventions there is no unity of invention.

In the above groups of claims, the identified features may have the potential to make a contribution over the prior art but are not common to all the claimed inventions and therefore cannot provide the required technical relationship. The only feature common to all of the claimed inventions and which provides a technical relationship among them is the presence of 2 synthetic auxin herbicides in the combination. However this feature does not make a contribution over the prior art because it is disclosed in:

D2- CIMARRON MAX herbicide (BAYER) published on 05 December 2015 as per Wayback Machine.

Or alternatively any of D1 or D3-D7

Therefore in the light of this document this common feature cannot be a special technical feature. Therefore there is no special technical feature common to all the claimed inventions and the requirements for unity of invention are consequently not satisfied *a posteriori*.

INTERNATIONAL SEARCH REPORT		International application No.	
Information on patent family members		PCT/IB2018/055716	
This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.			
Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
US 2014/0256552 A1	11 September 2014	US 2014256552 A1	11 Sep 2014
		US 8999891 B2	07 Apr 2015
		AU 2014225854 A1	27 Aug 2015
		AU 2014225854 B2	17 Nov 2016
		CA 2901341 A1	12 Sep 2014
		EP 2964031 A1	13 Jan 2016
		JP 2016509071 A	24 Mar 2016
		JP 6360504 B2	18 Jul 2018
		WO 2014138177 A1	12 Sep 2014
US 2011/0092366 A1	21 April 2011	US 2011092366 A1	21 Apr 2011
		US 8809233 B2	19 Aug 2014
		AU 2009259383 A1	23 Dec 2009
		AU 2009259383 B2	18 Sep 2014
		BR PI0914206 A2	11 Aug 2015
		CA 2725375 A1	23 Dec 2009
		EA 201100008 A1	30 Aug 2011
		EA 021466 B1	30 Jun 2015
		EP 2296466 A2	23 Mar 2011
		EP 2296466 B1	19 Mar 2014
		EP 2740358 A1	11 Jun 2014
		EP 2740358 B1	21 Feb 2018
		EP 2740359 A1	11 Jun 2014
		EP 2740359 B1	21 Feb 2018
		EP 2740360 A1	11 Jun 2014
		EP 2740360 B1	06 Dec 2017
		EP 2742802 A1	18 Jun 2014
		RS 53312 B	31 Oct 2014
		US 2014309110 A1	16 Oct 2014
		US 2014309111 A1	16 Oct 2014
		WO 2009153246 A2	23 Dec 2009
CN 104542663 A	29 April 2015	CN 104542663 A	29 Apr 2015
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.			

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INTERNATIONAL SEARCH REPORT Information on patent family members		International application No. PCT/IB2018/055716	
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Patent Document/s Cited in Search Report		Patent Family Member/s	
Publication Number	Publication Date	Publication Number	Publication Date
CN 106472529 A	08 March 2017	CN 106472529 A	08 Mar 2017
End of Annex			
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. Form PCT/ISA/210 (Family Annex)(January 2015)			