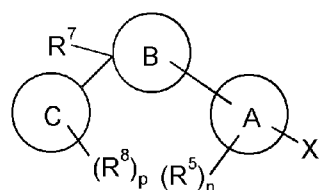




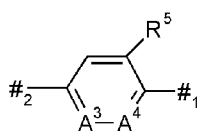
- (51) **International Patent Classification:**  
A01P 7/04 (2006.01) A01N 43/80 (2006.01)
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PCT/EP2011/051511  
3 February 2011 (03.02.2011) EP  
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- (74) **Agent:** THWAITE, Jonathan; Syngenta Crop Protection, Münchwilen AG, Schaffhauserstrasse, CH-4332 Stein (CH).

[Continued on next page]

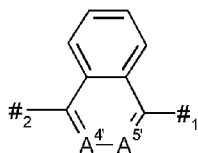
## (54) Title: METHODS OF PEST CONTROL IN SOYBEAN



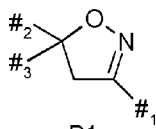
(III)



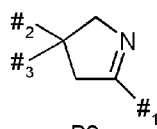
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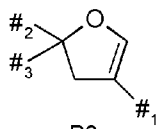
A2a



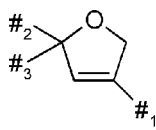
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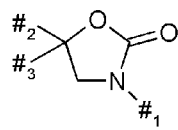
B2



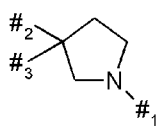
B3



B4



B5



B6

(57) **Abstract:** The present invention provides methods comprising applying to a crop of soybean plants, the locus thereof, or propagation material thereof, a compound of formula III wherein wherein  $A^3$ ,  $A^4$ ,  $A^4$  and  $A^5$  are independently C-H, or nitrogen and wherein #1 indicates the bond to X and #2 indicates the bond to cycle B; cycle B is selected from B1 to B6 wherein #1 indicates the bond to cycle A, #2 indicates the bond to  $R^7$  and #3 indicates the bond to cycle C; cycle C is phenyl;  $R^5$  is chloro, bromo,  $CF_3$  or methyl;  $R^7$  is chlorodifluoromethyl or trifluoromethyl; each  $R^8$  is independently bromo, chloro, fluoro or trifluoromethyl; p is 2 or 3; and wherein X is defined in the claims. The methods are preferably for the control of stinkbugs, in particular *Euschistus*.



(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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

**Published:**

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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

15 November 2012

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2012/051638

A. CLASSIFICATION OF SUBJECT MATTER INV. A01P7/04 A01N43/80 ADD.		
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) A01N		
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) EPO-Internal, WPI Data, CHEM ABS Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007/066617 A1 (MITA TAKESHI [JP] ET AL) 22 March 2007 (2007-03-22) cited in the application paragraph [0008] pages 89, 96; tables 8, 11; compounds 2-054, 5-151 paragraphs [0174], [0183] paragraphs [0213] - [0217] -----	1-3, 13-16
X	US 2010/234219 A1 (LAHM GEORGE PHILIP [US] ET AL) 16 September 2010 (2010-09-16) cited in the application paragraphs [0004] - [0025] paragraphs [0001], [0034] paragraphs [0184], [0257], [0276], [0300] paragraphs [0283] - [0284] ----- -/--	4,9, 11-16
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 another 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 "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report	
31 July 2012	25/09/2012	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Sawicki, Marcin	

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2012/051638

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/254959 A1 (LAHM GEORGE PHILIP [US] ET AL) 7 October 2010 (2010-10-07) cited in the application paragraphs [0004] - [0011] paragraphs [0001], [0045] paragraphs [0195], [0325], [0290], [0292] paragraphs [0329] - [0332] -----	4,9, 11-16
X	US 2010/279999 A1 (RENOLD PETER [CH] ET AL) 4 November 2010 (2010-11-04) cited in the application pages 1-7, 33; table A paragraph [0165] paragraphs [0201] - [0225] paragraphs [0187], [0195] -----	5-9, 11-16

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2012/051638

## 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:
  
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 additional sheet

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 an 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3(completely); 13-16(partially)

Relating to the methods and uses comprising compounds of formula (I)

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2. claims: 4(completely); 9, 11-16(partially)

Relating to the methods and uses comprising compounds of formula (II)

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3. claims: 5-8, 10(completely); 9, 11-16(partially)

Relating to the methods and uses comprising compounds of formula (II) wherein X= P3-P11

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2012/051638

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Information on patent family members

International application No

PCT/EP2012/051638

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