

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2018/066825

International filing date (day/month/year)
22.06.2018

Priority date (day/month/year)
28.06.2017

International Patent Classification (IPC) or both national classification and IPC
INV. A01N43/82 A01N43/90

Applicant
SYNGENTA PARTICIPATIONS AG

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| ☒ | Box No. I | Basis of the opinion |
| ☐ | Box No. II | Priority |
| ☐ | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| ☐ | Box No. IV | Lack of unity of invention |
| ☒ | Box No. V | Reasoned statement under Rule 43 <i>bis</i> .1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement |
| ☒ | Box No. VI | Certain documents cited |
| ☐ | Box No. VII | Certain defects in the international application |
| ☒ | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established 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)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-14</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-14</u>
Industrial applicability (IA)	Yes: Claims	<u>1-14</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Reference is made to the following documents:

- D1 WO 2017/118689 A1 (SYNGENTA PARTICIPATIONS AG [CH]) 13 July 2017 (2017-07-13)
- D2 WO 2017/110864 A1 (SUMITOMO CHEMICAL CO [JP]) 29 June 2017 (2017-06-29)
- D3 WO 2017/085100 A1 (BASF SE [DE]) 26 May 2017 (2017-05-26)

The present application is directed to a fungicidal composition comprising trifluoromethyl-oxadiazole derivatives (A) combined to a component (B) that is a pesticide from a larger group comprising different structures and mode of actions. The application is also directed to a method to control fungal pest by applying said composition.

Re Item V

Novelty

Claims 1 to 14 are considered to be novel.

D1 discloses microbiocidal oxadiazole derivatives are disclosed that correspond to the structure (A): an oxadiazole is substituted in position 5 by a trifluoromethyl and in position 3 by a phenyl ring that is para-substituted with a CH₂-ring group. The ring can be an heterocycle. Compounds 1.209, p. 112, 1.245, 1.246, p. 121, 1.247, 1.248, 1.252, p. 122, 1.259, 1.260, 1.264, p. 124, 1.266, 1.267, 1.268, p. 125, 1.285, p. 128, 1.304, p. 131. Their use in combination is disclosed on p. 36, l. 20 to 39, l. 26 with selected chemicals of a long list wherein acibenzolar, azoxystrobin, bixafen, benzovindiflupyr, carbendazim, chlorothalonil, cyproconazole, cyprodinyl, difenoconazole, epoxiconazole, fenhexamid, fenpropidin, fenpropimorph,, flutriafol, fluxapyroxad, fosetyl, ipconazole, mancozeb, mandipropamid, mefentrifluconazole, metalaxyl, penthiopyrad, picoxystrobin, prothioconazol, pydiflumetofen, sedaxane, sipconazole, tebuconazole, spiroxamine, trifloxystrobin correspond to compounds (B) of claim 1. Nevertheless, the explicit selection of preferred compositions is missing so that this document cannot be used as novelty destroying.

D2 describes some trifluorooxadiazole derivatives are used in combinations with a further pesticide in tests against *Septoria*, *Colletotrichum*, *Cladosporium*. Some compounds of group (B) are strobilurines, conazoles, bixafen, benzovindiflupyr, etc.. that correspond to the components (B) of claim 1. The trifluorooxadiazole are substituted in position 5 by a phenyl-ring that has a substituents in para-position. The structures

(A) never fall in the pattern of group A of claim 1, so that the document cannot be considered as novelty destroying (see paragraphs [0005], [0006], [0015] - [0025], [0082] - [0101]).

D3 describes trifluorosubstituted oxadiazoles for combating phytopathogenic fungi. Examples 30 to 32 differ from the compounds of claim 1 for the heterocycle that is attached to the methylene-bridge. In the present case a saturated five member ring is involved with or without substituents. The new structures can be combined to further pesticidal agents. General structure I is combined to certain preferred pesticides, for example to bixafen, fluopyram, fluxapyroxad, cyproconazole, difenoconazole, etc... in order to improve the effect. The examples only involve the new components. The document is not novelty destroying because the trifluoroxadiazole derivative here disclosed are different from the ones of claim 1 (see page 1, line 27 - page 2, line 27; page 7, line 10 - line 18; page 8, line 30 - page 9, line 5; page 22, line 20 - page 25, line 1; page 49, line 1 - page 65, line 23; page 65 - page 71; page 75).

Inventive Step

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 to 14 does not involve an inventive step in the sense of Article 33(3) PCT.

D3 is regarded as being the prior art closest to the subject-matter of claims 1 to 14, and discloses new trifluoromethyl-oxadiazoles. These are suitable to be combined to further active ingredients in order to control harmful phytopathogenic disease.

The subject-matter of claims 1 to 14 therefore differs from this known **D3** in that the methylenic bridge connects the phenyl ring to nitrogen unsaturated heterocycles, that present two or three nitrogen atoms or that are fused to a further ring.

According to the application, the combination of such structures (A) to the compounds listed as (B) can deliver an improved fungicidal activity. The claimed effect has not been disclosed, so that the problem of providing improved method of treatment of phytopathogenic disease does not appear as having been solved.

The problem to be solved by the present invention may therefore be regarded as how to provide a further method of treatment of phytopathogenic disease.

The solution proposed in claims 1 to 14 of the present application cannot be considered to involve an inventive step (Article 33(3) PCT). The combination of known active ingredients as the ones of list (B) to new structures as the ones named (A) is a solution to the problem that could not have been found by the man skilled in the art since

the structures (A) are novel. The proposed solution to the posed technical problem appears as non obvious. Nevertheless, there is no evidence that the problem has been actually solved.

The inventive step for the claimed mixtures and for their use cannot be acknowledged because no evidence has been provided of the effect of the combinations, nor preparative examples have been provided. The attention of the applicant is drawn to the fact that the inventive step of a claimed invention is based on a given technical effect, that should in principle be achievable over the whole scope claimed and should be evident from examples (see par. 9.8.3 of the Case Law, Ed. 2013, p. 212 and decisions cited therein).

Industrial Applicability

Claims 1 to 14 are considered as industrially applicable.

Re Item VI

The present document validly claims the priority of 28.06.2017. In the European Procedure D1 and D2 will be considered as prior art for the assessment of novelty, according to Article 54(3) EPC, since D1 and D2 claim the earlier priorities of 08.01.2016, 08.07.2016 and 25.12.2015, respectively.

Nevertheless, the two documents will not be used since they are not relevant for novelty for the reasons described in item V.

Re Item VIII

Clarity

The application does not meet the requirements of Article 6 PCT, because claim 1 is not clear.

The term "Timorex GoldTM" employed in claim 1 and appearing to be a registered trade mark has no precise meaning as it is not internationally accepted as a standard descriptive term, thereby rendering the definition of the subject-matter of these claims unclear, Article 6 PCT. Even the explanation in parentheses is not considered as clear, since a plant extract has not clearly defined composition, so that the desired ingredients are not explicitly disclosed.

The term "fludioxinil" is probably a typographic mistake for "fludioxonil".