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**Datasheet for the decision  
of 20 April 2023**

**Case Number:** T 1563/20 - 3.3.02

**Application Number:** 17158810.6

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A01N43/40, A01N37/50, A01N37/34

**Language of the proceedings:** EN

**Title of invention:**  
PESTICIDE COMPOSITION COMPRISING A TETRAZOLYLOXIME DERIVATIVE  
AND AN INSECTICIDE ACTIVE SUBSTANCE

**Applicant:**  
Bayer CropScience Aktiengesellschaft

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**

Inventive step

**Decisions cited:**

T 0887/14, T 1984/15

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1563/20 - 3.3.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.02**  
**of 20 April 2023**

**Appellant:** Bayer CropScience Aktiengesellschaft  
(Applicant) Alfred-Nobel-Straße 50  
40789 Monheim (DE)

**Representative:** BIP Patents  
c/o Bayer Intellectual Property GmbH  
Alfred-Nobel-Straße 50  
40789 Monheim am Rhein (DE)

**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 11 March 2020  
refusing European patent application No.  
17158810.6 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** M. O. Müller  
**Members:** S. Bertrand  
R. Romandini

## **Summary of Facts and Submissions**

- I. The appeal lodged by the applicant ("appellant") lies from the examining division's decision to refuse European patent application No 17 158 810.6.
- II. The following document is used in the present decision:  
  
D1: EP 1 426 371 A1
- III. In the impugned decision, the examining division's conclusion was that the subject-matter of the independent claims according to the main request and the first to third auxiliary requests then on file did not involve an inventive step in view of D1 as the closest prior art.
- IV. In its statement of grounds of appeal, the appellant contested the decision under appeal and submitted enclosure 1.
- V. The board issued a communication pursuant to Article 15(1) RPBA 2020 in preparation for the oral proceedings. The board's preliminary opinion included that the claims of the main request and the first to third auxiliary requests did not comply with the requirements of Articles 84 and 123(2) EPC and the subject-matter of claim 1 of each of the main request and that of the first to third auxiliary requests did not meet the requirements of Article 56 EPC in view of D1 as the closest prior art.
- VI. In a further letter dated 21 February 2023, the appellant submitted new sets of claims of the main request and the first to third auxiliary requests and

provided further submissions regarding the inventive step of the claimed subject-matter.

- VII. Oral proceedings before the board were held by videoconference on 20 April 2023.
- VIII. The appellant's requests were that the decision under appeal be set aside and that the application be granted on the basis of the main request or, alternatively, the first to third auxiliary requests, all requests having been filed on 21 February 2023.
- IX. The appellant's case is summarised in the Reasons below.

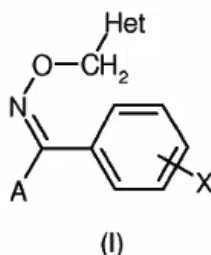
## Reasons for the Decision

### *Third auxiliary request*

1. Claim 1 of the third auxiliary request reads as follows:

"1. A composition comprising:

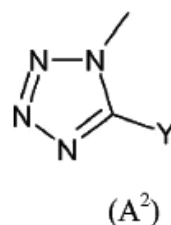
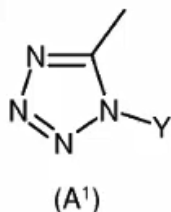
A) a tetrazolyloxime derivative of formula (I)



wherein

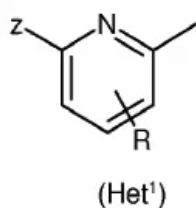
- X represents a hydrogen atom;

- A represents a tetrazoyl group of formula (A<sup>1</sup>) or (A<sup>2</sup>):



wherein Y represents a methyl group or an ethyl group;  
and

- Het represents a pyridyl group of formula (Het<sup>1</sup>):



wherein

R represents a hydrogen atom or a chlorine atom;

Z represents a group of formula QC(=O)NH- wherein Q represents an alkyl group having 1 to 8 carbon atoms or an alkoxy group having 1 to 8 carbon atoms; and

D) an insecticide compound in an A/D weight ratio ranging from 1/1,000 to 1,000/1, wherein said insecticide compound D is selected from the group consisting of clothianidin and imidacloprid."

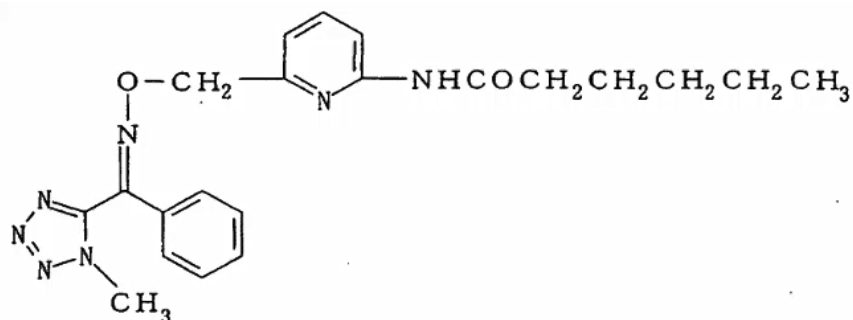
In the following, the tetrazolyloxime derivative of formula (I) is referred to as compound A and the insecticide compound is referred to as compound D.

2. Article 56 EPC

2.1 The application is concerned with providing a pesticide composition intended for protecting plants, crops or seeds against fungal diseases (page 1, lines 7-9).

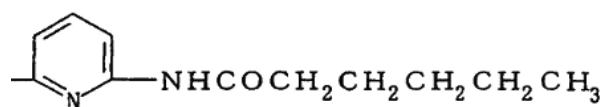
2.2 D1 as the closest prior art

D1 (abstract) relates to tetrazolyloxime derivatives and to an agricultural chemical containing them as a plant disease controlling agent. Preparation example 24 of D1 discloses the preparation of the following tetrazolyloxime derivative:



This compound comprises the following groups identified in claim 1 of the third auxiliary request:

The following pyridyl moiety

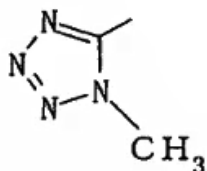


of the compound of preparation example 24 corresponds to the (Het<sup>1</sup>) group defined in claim 1 of the third auxiliary request. More specifically, one of the hydrogen atoms of the pyridyl ring of this pyridyl moiety corresponds to substituent R of the Het<sup>1</sup> group of claim 1 of the third auxiliary request. The NHCOCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub> group of this pyridyl moiety corresponds to Z represented by formula QC(=O)NH- as defined for the Het<sup>1</sup> group in claim 1 of

the third auxiliary request, with the  $\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$  group of the pyridyl moiety being an alkyl having five carbon atoms, and thus corresponds to Q.

The phenyl group of the compound of preparation example 24 is unsubstituted and thus comprises five hydrogen atoms, implying that X is a hydrogen atom and is thus as defined in claim 1 of the third auxiliary request.

The following tetrazoyl group of the compound of preparation example 24



is a tetrazoyl group of formula  $(A^1)$ , with Y being a methyl group, both as required by claim 1 of the third auxiliary request.

In view of the above, the compound of preparation example 24 is a compound A according to claim 1 of the third auxiliary request.

The tetrazolyloxime derivatives disclosed in D1 are reported to be fungicides against plant pathogens (e.g. paragraph [0057] of D1).

This represents the same aim as that of the patent application. Thus, D1 is suitable as the closest prior art for the assessment of inventive step. This was not disputed by the appellant.



### 2.3 Distinguishing features

D1 does not disclose any composition comprising clothianidin and imidacloprid, i.e. the insecticide compounds listed as compounds D in claim 1 of the third auxiliary request.

Thus, the distinguishing features of claim 1 of the third auxiliary request over D1 are the compound D and the A/D weight ratio ranging from 1/1000 to 1000/1.

### 2.4 Technical effect and objective technical problem

To formulate the technical problem, the appellant relied on examples B and C of the application, the data filed on 2 July 2018 and the annex filed during the oral proceedings before the examining division and re-filed as enclosure 1 with the statement of grounds of appeal.

#### 2.4.1 Example B (see in particular the table on page 51) of the application is a fungicidal test against *Venturia* (fungus, plant pathogen) on apples. The compound of formula 1 in the table on page 51 is a compound of formula (I) according to claim 1 (compound A) where X = H, A = a group of formula (A<sup>1</sup>), Y = methyl, R = hydrogen and Q = pentyloxy (table on page 50).

This compound is tested alone and in combination with clothianidin and imidacloprid (weight ratio of 1/1, according to claim 1 of the main request). Clothianidin and imidacloprid are compounds D according to claim 1 of the third auxiliary request. For both combinations, the observed value ("found") of the fungicidal efficacy against *Venturia* is greater than the expected value ("calc").

Example C of the application (table on page 53) is a fungicidal test against *Alternaria* (fungus, plant pathogen) on tomatoes. The same combinations as in example B (the compound of formula 1 (compound A) and clothianidin or imidacloprid (compound D)) are tested and show an observed value ("found") greater than the expected value ("calc.").

2.4.2 The data filed on 2 July 2018 comprise data on the fungicidal efficacy of compositions according to claim 1 of the third auxiliary request. The table on page 5 of these data shows the fungicidal efficacy observed against *Phytophthora infestans* (fungus, plant pathogen) on tomatoes ("found") and compared with the expected value ("calc.").

The first compound in the table on page 5 ("formula 2") is a compound A according to claim 1 of the third auxiliary request where X = H, A = a group of formula (A<sup>1</sup>), Y = methyl, R = hydrogen and Q = t-butyloxy.

This compound was tested alone and in combination with imidacloprid, i.e. a compound D according to claim 1 of the third auxiliary request, at a weight ratio of 1/200, according to claim 1 of the third auxiliary request.

A further test was carried out against *Peronospora* (fungus, plant pathogen) on oil seed rape (table on page 12). The same compound A as in the table on page 5 was tested alone and in combination with clothianidin or imidacloprid (compound D according to claim 1 of the third auxiliary request) at a weight ratio of 1/0.5, according to claim 1 of the third auxiliary request.

For these combinations in the tables on pages 5 and 12, the observed value ("found") is greater than the expected value ("calc.").

- 2.4.3 Enclosure 1 filed with the statement of grounds of appeal summarises the data of D1 regarding the fungicidal efficacy of compounds A according to claim 1 of the third auxiliary request, which differ on account of substituent A (see the last column in Tables 2.1 and 2.2:  $A = A^1$  vs  $A = A^2$ ) and substituent Q (see the last column in Tables 3.1 and 3.2: Q = n-propyl, i-propyl, n-butyl, t-butyl, n-pentyl or n-hexyl vs Q = n-propoxy, i-propoxy, n-butoxy, t-butoxy, n-pentoxy or n-hexoxy).
- 2.4.4 On the basis of the above data, the appellant formulated the objective technical problem as the provision of a fungicide composition in which the fungicidal effect of compound A is enhanced by the insecticide of claim 1 of the third auxiliary request or in which synergistic fungicidal effects are achieved by a composition comprising compound A and the insecticide.
- 2.4.5 The board acknowledges that the compositions tested in examples B and C of the application and in the experiments filed on 2 July 2018 exhibit an enhanced and/or a synergistic fungicidal effect. However, for the following reasons, this effect cannot be extrapolated to any compound other than those tested in examples B and C of the application and in the experiments filed on 2 July 2018 and encompassed by claim 1 of the third auxiliary request.

As set out above, compound A tested in examples B and C of the application is a compound of formula (I) where  $X = H$ , A = a group of formula ( $A^1$ ), Y = methyl, R = hydrogen and Q = pentyloxy (table on page 50).

Compound A tested in the experiments filed on 2 July 2018 is a compound of formula (I) where  $X = H$ , A = a group of formula ( $A^1$ ), Y = methyl, R = hydrogen

and Q = t-butyloxy. Hence, the only variation between the compound tested in examples B and C in the application and that tested in the experiments filed on 2 July 2018 is substituent Q (pentyloxy vs t-butyloxy). All the other substituents are the same, namely X = H, A = a group of formula (A<sup>1</sup>), Y = methyl and R = hydrogen.

However, claim 1 of the third auxiliary request encompasses many different possibilities with regard to the substitution of compound A. More specifically, by comparison with the tested compounds, compound A according to claim 1 of the third auxiliary request may comprise a group of formula (A<sup>2</sup>) as A, as opposed to (A<sup>1</sup>) in the tested compounds, an ethyl group as Y, as opposed to methyl in the tested compounds, a chlorine atom as R, as opposed to the hydrogen atom in the tested compounds, and an alkyl group having 1 to 8 carbon atoms as Q, as opposed to an alkoxy group having four (t-butyloxy) or five (pentyloxy) carbon atoms. Hence, claim 1 of the third auxiliary request covers chemical structures which are considerably different from those tested. It is therefore not credible that the effect proven for the combination of two quite similar specific compounds A in combination with the two insecticides according to claim 1 of the third auxiliary request is also present in combinations of any other compounds A encompassed by claim 1 of the third auxiliary request with any of the two insecticides referred to in that claim.

2.4.6 This finding is not changed by enclosure 1 filed by the appellant with the statement of grounds of appeal. This enclosure only provides evidence that compounds A according to claim 1 of the third auxiliary request have a fungicidal effect - it does not show that they exhibit a synergistic or enhanced fungicidal effect

when combined with an insecticide compound, let alone any compound D as covered by claim 1 of the third auxiliary request. Yet the mere fact that a certain compound (compound A in the case in hand) has a fungicidal effect by no means implies that this effect is enhanced by way of synergy when this compound is combined with a certain other compound (insecticides D in the case in hand).

2.4.7 The appellant also submitted that, in line with decision T 887/14, extrapolating the synergism found for the mixtures in examples B and C of the application and in the experiments filed on 2 July 2018 to the other claimed mixtures was justified.

In T 887/14 (Reasons 3), it was found plausible that compounds that belong to a particular class but are different from those for which synergy with a second active compound had been proven would also show synergy with that second active compound, since the patent itself provided a plausible mechanistic explanation of why this would be the case. Absent any evidence to the contrary, the deciding board in that case saw no reason not to accept this as a reasonable assumption.

However, contrary to T 887/14, the current application does not provide a plausible mechanistic explanation of why the synergy observed for the compositions in examples B and C of the application and in the experiments filed on 2 July 2018 could be extrapolated to any other compositions, nor has the appellant provided any such explanation. Thus the appellant's argument is not convincing.

2.4.8 The appellant also submitted that it was very surprising that adding an insecticide compound D enhanced the fungicidal efficacy of compound A.

However, the fact that any effect achieved by some embodiments covered by a claim is surprising is irrelevant as regards whether the same (surprising) effect can be credibly obtained for other embodiments of this claim.

- 2.4.9 For all the above reasons, the alleged enhancement or synergy of the fungicidal efficacy cannot be taken into consideration when formulating the objective technical problem.

Thus, the board concludes that the objective technical problem in view of D1 can only be considered as the provision of an alternative pesticide/fungicide composition.

## 2.5 Obviousness

D1 teaches that tetrazolyloxime derivatives can be mixed with conventional insecticides (paragraph [0065] of D1).

Selecting any known insecticide, such as compound D defined in claim 1 of the third auxiliary request, for this mixing step disclosed in D1 is, for want of any effect, an entirely arbitrary selection of ingredients. In line with the case law of the boards of appeal (see for instance T 1984/15, point 4.5 of the Reasons with further references), any such arbitrary selection is within the routine abilities of the skilled person. For this reason alone it cannot confer inventive character on the claimed subject-matter.

The appellant did not dispute the obviousness of the claimed solution when considering the objective technical problem to be the provision of an alternative pesticide/fungicide composition.

2.6 Consequently, the subject-matter of claim 1 of the third auxiliary request does not involve an inventive step.

3. Therefore, the third auxiliary request is not allowable.

*Main request and first and second auxiliary requests*

4. Claim 1 of the second auxiliary request is identical to claim 1 of the third auxiliary request.

Claim 1 of the first auxiliary request differs from claim 1 of the third auxiliary request in that insecticide D comprises further insecticides.

Claim 1 of the main request differs from claim 1 of the third auxiliary request in that the definitions of R, Y and X are broader and in that insecticide D comprises further insecticides.

Thus, the composition according to claim 1 of the third auxiliary request is encompassed by claim 1 of each of the main request and the first and second auxiliary requests.

Consequently, the reasons given as to why the subject-matter of claim 1 of the third auxiliary request lacks inventive step apply, *mutatis mutandis*, to the subject-matter of claim 1 of each of the main request and the first and second auxiliary requests.

The main request and the first and second auxiliary requests are thus not allowable.

5. None of the appellant's requests is allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated