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Datasheet for the decision of 18 March 2024

Case Number: T 1352/21 - 3.3.02

Application Number: 15858203.1

Publication Number: 3217796

IPC: A01N43/824, A01N41/10, A01P13/02

Language of the proceedings: EN

Title of invention:
HERBICIDAL COMPOSITION AND METHOD FOR CONTROLLING PLANT GROWTH

Applicant:
Rotam Agrochem International Company Limited

Headword:
FLUFENACET MESOTRIONE COMPOSITION / ROTAM AGROCHEM

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
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Case Number: T 1352/21 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 18 March 2024

Appellant: (Applicant)	Rotam Agrochem International Company Limited Unit 6, 26/F, Trend Centre 29 Cheung Lee Street Chai Wan (HK)
Representative:	Akers, Noel James N.J. Akers & Co 63 Lemon Street Truro, Cornwall TR1 2PN (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 15 March 2021 refusing European patent application No. 15858203.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. O. Müller
Members:	M. Maremonti
	B. Burm-Herregodts

Summary of Facts and Submissions

I. The appeal by the applicant ("appellant") lies from the decision of the examining division to refuse European patent application No. 15 858 203.1.

II. During the examination proceedings, reference was made to the following items of evidence, *inter alia*:

D1: WO 02/21922 A1

D5: Supplementary Technical Information filed for European patent application No. 01982298.0 (D1), EPO Register, 19 May 2004, pages 3-8, XP055605145

III. The appealed decision is based on the set of claims of the main request as filed by letter dated 29 January 2020, the sets of claims of auxiliary requests I to XXI as filed by letter dated 8 January 2021 and the set of claims of auxiliary request XXII as filed during the oral proceedings. The examining division came to the following conclusion, *inter alia*:

- Neither the subject-matter of claim 1 of the main request nor that of auxiliary requests I to XXII involved an inventive step in view of D1 as the closest prior art.

IV. Claim 1 of auxiliary request XXII, which was found by the examining division not to be allowable, reads as follows:

"*1. A method of controlling the growth of a plurality of Setaria spp., Lolium spp., Chenopodium spp., Solanum spp., and Polygonum spp., at a locus comprising applying to the locus herbicidally effective amounts of*

flufenacet and mesotrione, wherein flufenacet and mesotrione are applied to the locus at an application rate of 500 g/ha of flufenacet and 50 g/ha of mesotrione".

V. In the appeal proceedings, the appellant contested the examining division's reasoning and argued, *inter alia*, that the subject-matter of the claims of the main request and auxiliary requests I to XXII underlying the appealed decision did involve an inventive step in view of D1 as the closest prior art.

VI. The appellant was summoned to oral proceedings as per its request. In preparation for the oral proceedings, the board issued a communication under Article 15(1) RPBA.

VII. By letter dated 18 January 2024, the appellant replied to the board's communication and filed, *inter alia*, a set of claims according to auxiliary request XXVII.

VIII. Oral proceedings before the board were held on 18 March 2024 by videoconference in the presence of the appellant. During the oral proceedings, the appellant made auxiliary request XXVII filed by letter dated 18 January 2024 its main request and withdrew all other claim requests on file.

IX. Final request

The appellant requested that a patent be granted on the basis of the claims of the main request filed as auxiliary request XXVII by letter dated 18 January 2024.

X. As regards the appellant's submissions that are relevant for the decision, reference is made to the reasons for the decision set out below.

Reasons for the Decision

Main request - claim 1 - compliance with Article 123(2) EPC

1. Claim 1 of the main request reads as follows:

"*1. A method of controlling the growth of a plurality of Setaria spp., Lolium spp., Chenopodium spp., Amaranthus spp., Solanum spp., Polygonum spp., and Abutilon spp. at a locus comprising applying to the locus herbicidally effective amounts of flufenacet and mesotrione, wherein flufenacet and mesotrione are applied to the locus at the same time at an application rate of 200 g/ha of flufenacet and 80 g/ha of mesotrione in the form of an emulsion concentrate (EC) formulation, 200 g/ha of flufenacet and 60 g/ha of mesotrione in the form of a wettable powder (WP) formulation, or 500 g/ha of flufenacet and 50 g/ha of mesotrione in the form of a suspension concentrate (SC) formulation.*"

1.1 The subject-matter of claim 1 of the main request has a basis in examples 5, 6 and 8 of the application as filed (see pages 12 to 17). In particular, the application rates of the herbicides flufenacet and mesotrione, as well as the formulation types, have been restricted to those used in examples 5, 6 and 8. Moreover, it has been specified that flufenacet and mesotrione are applied to the locus at the same time.

1.2 The main request further includes dependent claims 2 to 4. The subject-matter of claims 2 to 4 has a basis in, *inter alia*, claims 22, 15 and 20 of the application as filed.

1.3 The board concurs with the appellant that the subject-matter of the claims of the main request does not extend beyond the content of the application as filed.

1.4 Therefore, the requirements of Article 123(2) EPC are met.

Main request - claim 1 - inventive step under Article 56 EPC

2. Closest prior art

2.1 In accordance with the appealed decision (page 7, point 18), the appellant indicated document D1 as the closest prior art. The board does not see any reason to diverge from this view.

2.2 D1 discloses (pages 2 to 4) a method for controlling the growth of weeds at a locus comprising applying to the locus herbicidally effective amounts of flufenacet and mesotrione. According to D1, flufenacet and mesotrione act synergistically when applied at application rates from 10 to 10000 g/ha of flufenacet and from 0.5 to 512 g/ha of mesotrione. Preferable application rates are from 80 to 875 g/ha of flufenacet and from 20 to 200 g/ha of mesotrione. The particularly preferred weight ratio of flufenacet to mesotrione ranges from 20:1 to 1:2 (page 5, lines 1 to 7). The weeds controlled are one or more of, *inter alia*, *Setaria spp.*, *Chenopodium spp.*, *Amaranthus spp.* and *Polygonum spp.* (page 6, lines 1 to 5). According to D1 (page 5, second paragraph), flufenacet and mesotrione are preferably applied in the form of water dispersible granules, but other formulation types known in the art may also be used.

3. Distinguishing features

The board concurs with the appellant that the subject-matter of claim 1 of the main request (see point 1. above) differs from the above disclosure in D1 in the specified application rates and formulation types of flufenacet and mesotrione.

4. Objective technical problem

4.1 As pointed out by the appellant, D1 discloses on pages 5 and 6 that pre- and post-emergence experiments 1 and 2 had been carried out on various weed species, including *Setaria spp.*, *Chenopodium spp.*, *Amaranthus spp.* and *Polygonum spp.*, i.e. species whose growth should be controlled also by the method defined in claim 1 of the main request. However, D1 does not describe the conditions of experiments 1 and 2 in terms of e.g. the application rates of flufenacet and mesotrione and formulation types; nor does it report the results of these experiments. D1 merely states (page 6, last paragraph) that "*an effective level of weed control against a number of weed species, at substantially reduced application rates of active ingredient was observed.*" This general statement does not contain any definition of what an "*effective level of control*" means, nor does it specify which weed species and how many of them were controlled.

4.2 In contrast, the board concurs with the appellant that the results reported in the application as filed (table 11 on page 17) show that the application rates and formulation types specified in claim 1 of the main request (point 1. above) allow higher efficiencies of weed control to be achieved as compared with different application rates and formulation types not covered by the claimed method but still falling within the general disclosure of D1 as reported above. In fact, the application rates and formulation types specified in claim 1 of the main request correspond to those of examples 5, 6 and 8 of the application as filed (pages 12 to 14 of the application as filed). Table 11 on page 17 of the application as filed reveals that these application rates and formulation types lead to a high level (> 90%), if not total control (100%), of the

growth of at least 3, and up to 5, different target plant species as defined in claim 1 of the main request. This performance in terms of weed control efficiency is higher than the results reported in table 11 for examples 3, 4, 7 and 9 concerning application rates and formulation types that fall within the general disclosure of D1 as reported above but are not in accordance with claim 1 of the main request.

4.3 Therefore, with the selection of the claimed application rates and formulation types from the general teaching of D1 it is possible to achieve improved control efficiency of the growth of a plurality of the weeds species mentioned in claim 1 of the main request.

4.4 Hence, the board concurs with the appellant that, starting from D1, the objective technical problem lies in the provision of an improved method of controlling plant growth, in particular one having a higher efficiency of control of the growth of a plurality of *Setaria spp.*, *Lolium spp.*, *Chenopodium spp.*, *Amaranthus spp.*, *Solanum spp.*, *Polygonum spp.*, and *Abutilon spp.*.

5. Obviousness of the claimed solution

5.1 As submitted by the appellant, D1 indicates on page 5, first paragraph, that the most preferred weight ratio of flufenacet to mesotrione is between 14:1 and 16:1 in humid conditions and between 17:1 and 20:1 in dry conditions. A skilled person facing the above-mentioned objective technical problem would thus have selected application rates of flufenacet and mesotrione fulfilling these most preferred weight ratios. However, in doing this, the claimed application rates would not have been arrived at since they correspond to weight ratios of flufenacet to mesotrione of 2.5:1, 3.33:1 and

10:1, i.e. far removed from the above values suggested in D1. Moreover, D1 (*loc. cit.*) suggests it is preferable to apply flufenacet and mesotrione as water dispersible granules, i.e. a formulation type not covered by claim 1 of the main request (point 1. above).

5.2 During the examination proceedings of D1, the applicant of D1 filed experimental report D5, which was available to the public via the EPO Register before the priority date of the application at issue here. According to D5 (pages 3 and 4), pre- and post-emergence tests were carried out on a number of weed species, among which, however, only *Amaranthus retroflexus* falls within the species for which growth control should be achieved according to claim 1 of the main request. The results of D5 (tables on pages 5 to 8) show that good control efficiencies were obtained by using application rates of flufenacet and mesotrione of either 60 and 50 g/ha or 15 and 50 g/ha, respectively.

5.3 As pointed out by the appellant, on the one hand, these application rates are far removed from the application rates defined in claim 1 of the main request. On the other hand, of the tested weed species, only *Amaranthus retroflexus* is mentioned in claim 1. Therefore, the skilled person facing the above-mentioned objective technical problem would at best have selected the application rates used in D5. In doing this, however, the claimed method would not have been obtained.

5.4 In view of the above, the board concurs with the appellant that the skilled person would not have been prompted either by D1 or by D5 to use flufenacet and mesotrione in the application rates and formulation types required by claim 1 of the main request when aiming to improve the control of the growth of a plurality of *Setaria spp., Lolium spp., Chenopodium*

spp., *Amaranthus spp.*, *Solanum spp.*, *Polygonum spp.*, and *Abutilon spp.*.

6. Therefore, the board concludes that the subject-matter of claim 1 of the main request involves an inventive step within the meaning of Article 56 EPC. The same applies to the subject-matter of claims 2 to 4 of the main request, which are dependent on claim 1.

7. Moreover, the board holds that on the basis of the available facts and evidence the claims of the main request also meet all of the other requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the examining division with the order to grant a patent on the basis of the claims of the main request filed as auxiliary request XXVII by letter dated 18 January 2024 and a description to be adapted thereto.

The Registrar: The Chairman:

M. Schalow M. O. Müller

Decision electronically authenticated