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Date
01.08.2024

Reference Q40398EP	OPPO 01	Application No./Patent No. 19152162.4 - 1111 / 3536146
Applicant/Proprietor Agventure B.V.		

BRIEF COMMUNICATION

Subject: ☐ Your letter of
☐ Our telephone conversation of
☐ Communication of
☒ Decision and minutes from oral proceedings dated 18.06.2024

Enclosure(s): ☐ Letter from the proprietor of the patent of
☐ Letter from the opponent of
☒ Copy (copies) EPO Form 2331

Communication:

All annexes to the letter as well as the consolidated list of all opposition citations are available for inspection via the European Patent Register at www.epo.org/register. Should you wish to receive these documents in paper format, they will be supplied to you free of charge if specifically requested on receipt of this communication (OJ EPO 2022, A28).



For the Opposition Division



☒ **Registered letter**

EPO Form 2911O 04.22 (29/07/24)

page 1 of 1



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Application No. / Patent No. 19 152 162.4 - 1111 / 3 536 146 / 01	Ref. Q40398EP	Date 01.08.2024
Proprietor Agventure B.V.		

Decision revoking the European Patent (Art. 101(2) and 101(3)(b) EPC)

The Opposition Division - at the oral proceedings dated 18.06.2024 - has decided:

European Patent No. EP-B- 3 536 146 is revoked.

The reasons for the decision are enclosed.

Possibility of appeal

This decision is open to appeal. Attention is drawn to the attached text of Articles 106 to 108 and Rules 97 to 98 EPC.

Opposition Division:

Chairman: Mundel, Christophe
2nd Examiner: Keller, Yves
1st Examiner: Bilanz, Jürg



Penney, Karen
Formalities Officer
Tel. No.: +49 89 2399-7914

Enclosure(s): 15 page(s) reasons for the decision (Form 2916)
Wording of Articles 106 - 108 and Rules 97-98 EPC (Form 2019)
Minutes of oral proceedings
List of cited documents

to EPO postal service: 29.07.24

SUMMARY OF FACTS AND SUBMISSIONS

- 1 European Patent EP 3 536 146 is based on European Patent Application 19152162 filed on 26.10.2010 as a divisional of European Application EP10770643, and claiming the priorities of US 25498009P and EP09013474, both filed on 26.10.2009. Mention of the grant of the patent was published on 27.04.2022 in the European Patent Bulletin 2022/17. The Proprietor of the Patent is Agventure B.V., Wageningen (NL).
- 2 Notice of opposition was filed on 25.01.2023 by J A Kemp LLP. The opponent cited Articles 100(a), (b), and (c) EPC as grounds for the opposition and cited 15 documents to factually support its request to revoke the patent in toto.
- 3 With a letter dated 06.06.2023 the patentee replied to the notice of opposition and requested rejection of the opposition and maintenance of the patent as granted or, alternatively, on the basis of one of two auxiliary claim requests filed with said letter. The reply of the patentee was furthermore accompanied by three documents and five expert declarations.
- 4 On 10.08.2023 the opponent reacted to the patentee's reply and filed further submissions.
- 5 Summons for oral proceedings to be held on 18.06.2024 were issued on 24.11.2023. The summons were accompanied by a preliminary and non-binding opinion concerning the main objections.
- 6 The opponent made further submissions on 19.03.2024, accompanied by 20 documents and expert declarations (D24-D43).
- 7 On 18.04.2024 both parties filed submissions under Rule 116 EPC. The opponent's submission was accompanied by a further eleven documents and expert declarations (D44-D54). The patentee filed four new auxiliary claim requests replacing the previously filed auxiliary claim requests in case the the opposition division did not adhere to the main request to reject the opposition. The submissions were furthermore accompanied by 21 documents and declarations (D55-D75).

- 8 Further submissions from the parties were obtained on 24.05.2024 by the patentee, and on 07.06.2024 by the opponent, accompanied by documents and declarations D76 to D82.
- 9 Oral proceedings were held as a videoconference on 18.06.2024. At the end of the oral proceedings the chairman announced the decision that the opposed patent is revoked (Articles 101(2) and 101(3)(b) EPC).
- 10 The documents in this decision are numbered according to the consolidated list of documents, annexed to this decision (Annex 1) and also available in the European Patent Register.

REASONS FOR THE DECISION

- 11 The opposition is admissible since it meets the requirements of Articles 99(1) and 100 and Rule 76 EPC.

MAIN CLAIM REQUEST (claims as granted)

Admissibility of Documents

- 12 The patentee requested not to admit documents D44 to D54 and the letter filed 19.03.2024. They argued that prior use must be substantiated in the notice of opposition. Moreover, no reason was given why the documents, which were available prior to the date the opposition was filed, were not included in the notice of opposition.
- 13 The opposition division can agree that evidence supporting the objections should be provided together with the notice of opposition. The division also would have preferred to see a full case at the end of the opposition period, even more so as it can be expected that professional representatives know which type of evidence is required to support an objection.

However, the division has no discretion not to admit evidence which is filed more than two months in advance of the date set for oral proceedings and which it considers to be highly relevant. Documents D44 to D54 were filed in

reply to questions raised by the division and the patentee and are *prima facie* considered to be highly relevant for the assessment of novelty.

14 Documents D44 to D54 are therefore admitted into the proceedings.

15 The admissibility of documents D55 to D82 was not explicitly questioned. These documents are also considered to be *prima facie* relevant and therefore admitted into the proceedings.

Postponement of Oral Proceedings

16 The patentee requested that the proceedings are adjourned if the opposition division decides to admit the late filed documents into the proceedings. The patentee argued that the objection of prior use was raised late and that the patentee should be given an opportunity to independently verify the prior use.

17 The division decided not to adjourn the oral proceedings.

The objection that claim 1 would lack novelty (Article 54 EPC) over clone US-W4 was raised in the notice of opposition (point 6.13). It was further substantiated in the opponent's letters dated 19.03.2024 and 18.04.2014, and the patentee replied to the objection in the letters dated 18.04.2024 and 24.05.2024. The opponent's right to be heard therefore seems to be respected.

As explained in detail further below, the question to be answered is whether clone US-W4 was publicly available and what the properties of this clone are. In the division's opinion this is not a question of prior use. Hence, there is also no late filed objection based on a prior use.

The division therefore also does not see any need to independently verify the statements concerning the ordered material mentioned in D76.

18 Claim 1 of the opposed patent reads:

A diploid, fertile, self-compatible and essentially homozygous *Solanum tuberosum* potato breeding line comprising plants having an average tuber yield expressed in grams of fresh weight of at least 200 grams per plant, wherein plants of said line have a level of homozygosity that is

above 75% when testing 100 loci, obtainable by a method comprising:

(a) providing a first potato plant, which first potato plant is a plant of a first diploid, self-compatible, fertile and essentially homozygous *S. tuberosum* potato line selected from NCIMB accession number 41663, NCIMB accession number 41664, NCIMB accession number 41665, or NCIMB accession number 41765, representative seeds of said lines having been deposited with the NCIMB, Aberdeen, Scotland under breeders reference AGVD 1, AGVD2, AGVD3, and AGVD 17 respectively, wherein said self-compatibility trait is due to the presence of a S-locus inhibitor (Sli) gene;

(b) providing a second *S. tuberosum* potato plant, wherein said second potato plant is a plant of a diploid potato line which may have any level of homozygosity, said line of said second potato plant comprising plants having an average tuber yield expressed in grams of fresh weight of at least 200 grams per plant;

(c) cross pollinating said first and second potato plant to provide seeds and collecting said seeds to thereby provide an offspring generation in the form of a hybrid offspring seed;

(d) growing said hybrid offspring seed into a population of hybrid offspring potato plants and selecting from said population plants producing tubers at a yield expressed in grams of fresh weight of at least 200 grams per plant, and

(e) selfing said hybrid offspring potato plant for between 1 to 8 selfings, thereby selecting for fertile offspring to thereby provide a diploid, self-compatible and essentially homozygous potato breeding line comprising plants having an average tuber yield expressed in grams of fresh weight of at least 200 grams per plant, wherein plants of said line have a level of homozygosity that is above 75%, and wherein said self-compatibility trait is due to the presence of said S-locus inhibitor (Sli) gene.

Article 100(c) EPC / Article 123(2) EPC

19 The opponent argued that the definition of homozygosity of claim 1 as granted would be an unallowable combination from two lists.

The division cannot follow the argumentation of the opponent.

19.1 Claim 1 as granted is derived from claim 3 of the application as published.

The passage in paragraph [0081] of the application as published (corresponding to page 21, lines 1 to 5 as filed) provides a definition of the term "essentially homologous". The term is furthermore also defined in paragraphs [0147] and [0148] of the patent as published (p. 30, line 10 to p. 31, line 2 of the application as filed). This passage refers to plants obtained by the invention which have above 75% homozygosity.

There is only one "homozygosity", and in the division's opinion the person skilled in the art would understand that any of the possible combinations of homozygosity and number of loci is meant.

The purpose of Article 123(2) is to safeguard the interests of third parties. The applicant or patentee is not allowed to make amendments which would surprise third parties who relies on the publication of the application to define the broadest scope of the invention.

The division cannot recognise any additional subject-matter which would be created by the claimed combination, let alone one that could take a third party by surprise.

19.2 The opponent furthermore argued that defining the term "essentially homozygous" by amendment only in the introductory part of claim 1 would selectively apply this feature to particular plants.

The division cannot follow this argument. The person skilled in the art would understand that the plants according to the invention, i.e. the plants as claimed, should have the homozygosity as defined in the application.

20 The division cannot follow the arguments of the opponent with respect to claim 1(e) either.

Claim 3(e) of the application as published refers to selfing or backcrossing of the hybrid offspring for between 1 to 8 selfings or backcrosses. Opponent's argument concerning the number of selfings (points 4.15 and 4.16 of the notice of opposition) therefore are not convincing.

Claim 3(e) as published refers to "selfing or backcrossing", hence it would appear to be allowable to limit to the first option, selfing. Moreover, paragraph [0175] of the application as published (corresponding to page 37, lines 5ff of the application as filed) refers to continuous selfing to obtain the plants of the

invention. This passage, in the division's opinion, also provides a basis for the selection of fertile offspring, because repeated selfings can only be performed with fertile plants.

Again, the division cannot recognise any new teaching that would result from these amendments.

- 21 The division therefore finds that the claims as granted meet the requirements of Article 123(2) EPC.

Article 100(a) EPC / Article 54 EPC

- 22 The opponent raised an objection under Article 54 EPC based on D5.

D5 discloses a series of inbred lines and determined the level of heterozygosity (table 2). The opponent argued that the "considerable tuber yields" referred to on page 982 (left col., first para.), would be more than 200 grams per plant.

- 23 D5 does not disclose a tuber yield of 200 grams per plant. The opponent will be aware that hypothetical considerations are not sufficient to deny novelty of a claimed product.

The claims therefore are novel over D5.

- 24 Further objections under Article 54 EPC were based on D7.

- 25 In a first line of arguments, the opponent argued that lines US-W 5309 and US-W 5315 disclosed in D7 would meet the requirements of claim 1. The opponent argued that the tuber yield of the two lines is higher than 200 grams per plant in the S_1 or S_2 generation (table 1). The homozygosity of the S_2 generation would be calculated to be 75% based on a reduction of heterozygosity of 50% per generation.

- 26 The opposition division cannot agree. D7 does not disclose a combination of 75% homozygosity and a tuber yield of at least 200 grams per plant for lines US-W 5309 and US-W 5315.

Again, theoretical considerations (this time concerning the homozygosity) are not sufficient to demonstrate that the S₂ generation indeed has 75% homozygosity.

The opponent argued that in theory the heterozygosity is reduced by 50% in every generation. However, it can be seen from D5 (abstract) that the average rate of reduction in heterozygosity per selfed generation may well be lower than the theoretical value of 50%. Moreover, the value of 97% homozygosity in the S₅ generation referred to in D7 is also based on theoretical considerations. The level of homozygosity was not experimentally determined in D7. D7 does not actually disclose any measured homozygosity or heterozygosity value.

The claims therefore are novel over lines US-W 5309 and US-W 5315.

- 27 The opponent furthermore argued that the haploid tetraploid inbred line US-W4 would fall under the terms of claim 1.

The patentee did not contest that US-W4 is a diploid *Solanum tuberosum*. Similarly, it was not contested that the fertility of US-W4 can be seen in D7 and other documents.

However, the patentee argued that it was not shown that US-W4 was self compatible due to the presence of the *Sl*i gene. Similarly, a yield of at least 200 grams per plant and the required homozygosity were not shown. Moreover, the alleged prior use was not demonstrated according to the standards set by the Boards of Appeal.

- 28 The opposition division finds that US-W4 falls under the terms of claim 1.

- 28.1 The opposition division is satisfied that US-W4 was publicly available from the US potato genebank, as explained in the declarations D36 and D76. A number of documents (D7, D59, D65, D79) disclose experiments involving US-W4, which also supports the finding that the clone was known and publicly available. Moreover, as pointed out in D76, even the deposited plants of the opposed patent have US-W4 in their pedigree (point 13).

The patentee did not directly challenge the public availability of the clone, but argued that its prior use was not sufficiently proven.

The opposition division, however, finds that this is not a question of a prior use.

The claimed plant lacks novelty under Article 54 EPC if a plant falling under the terms of the claim is known from the prior art and available to the public. It is irrelevant whether anybody actually has requested the clone from the US potato genebank; it is sufficient that there was the possibility to have access to it. In the division's opinion this is the same as with a written disclosure which is also relevant for assessing novelty, regardless of whether anybody has ever read the prior art text prior to the relevant date of a patent application.

The division therefore sees no need to discuss whether the alleged prior use is sufficiently substantiated according to the standards set out by the Boards of Appeal.

- 28.2 The patentee did not question the results reported in D76 that US-W4 (today) is self-compatible. However, the patentee argued that US-W4 as used in the declarations D36 and D76 could significantly differ from clone US-W4 available at the priority date. Moreover, it was submitted that the results shown in D8 are not sufficient proof that this trait would be due to the *Sli* gene.

The opposition division does not consider these arguments to be convincing.

The division can accept that there may be some genetic instability even in clonally propagated lines. However, when it comes to the question whether the self-compatibility trait could be the consequence of a genetic variation occurring after the priority date, the division has strong doubts. It is highly unlikely that such a trait develops "spontaneously" and goes unnoticed. This would be a rather sensational development that would attract the attention of everybody in the field of potato breeding.

The division therefore sees no reason to doubt that as far as self-compatibility is concerned, US-W4 today is essentially the same clone as US-4W prior to the priority date of the opposed patent.

Similarly, the division has difficulties to consider that US-W4 comprises markers indicative of the *Sli* locus (D8), but that the self-compatibility trait would be due to a different, unknown gene. This appears to be a highly unlikely hypothesis, because the *Sli* gene seems to be the only known gene causing this phenotype.

- 28.3 The patentee also questioned the tuber yield and the homozygosity of US-W4 as reported in D36 and D76. They argued that other documents would disclose diverging numbers, rendering it also unclear whether the experiments described in D36 and D76 indeed were done with US-W4.

Concerning the tuber yield the opposition division agrees with the patentee that D64 (p. 18) discloses a yield well below 200 grams per plant. However, the division considers the explanation given in D76 (points 14 and 15) to be convincing.

As to the required level of homozygosity, the division concurs with the opponent that 75% of 100 undefined loci cannot serve as a distinguishing feature for the claimed plants. The patentee pointed to D65 which reports a homozygosity of only 64,8% if 8091 SNPs are evaluated (p. 2, right col., 3rd para.). This, however, still leaves more than 5000 loci which are homozygous. D79 reports the identification of 3.9 million SNPs, of which 1.3 millions were heterozygous in US-W4 (p. 321, right col., 1st para.), resulting in roughly 66% homozygosity at 2.6 million loci.

Each of the documents reports well beyond 75 identical loci. The percentage of homozygosity will depend on the identity and the number of markers tested. This is also the reason why the homozygosity reported in D36/D76 and D65 or D79 differ.

In view of the above, the division also sees no reason to question whether the results disclosed in D36 and D76 indeed were obtained with clone US-W4.

- 28.4 The patentee furthermore argued, that the person skilled in the art was not aware of the characteristics of strain US-W4.

However, insofar as novelty of a natural product is concerned, the division finds it irrelevant whether the person skilled in the art knows all the properties of this product. Identifying further characteristics of a known product does not render the product as such novel. The deposited line AGVD3, for example, is known and available to the public, even though its exact starch composition is not known. Defining line AGVD3 by its amylopectin content would not render the line novel.

- 29 The opposition division therefore finds that at least claim 1 of the patent as granted lacks novelty over clone US-W4 (Article 54 EPC).

AUXILIARY CLAIM REQUEST 1 (filed on 18.04.2024 as AR2)

- 30 The patentee filed a new first auxiliary claim request, corresponding to AR2 as filed on 18.04.2024.

Claims 1, 6, and 11 of the first auxiliary claim request differ from the corresponding claims as granted in that the tuber yield of 200 grams is from plants raised from seedling.

- 31 The opponent did not raise any objections under Rule 80 EPC, and the opposition division is also satisfied that the requirements of said provision are met.

Article 84 EPC

- 32 The opponent raised an objection under Article 84 EPC. They were of the opinion that it could not reliably be determined whether a plant is grown from seeds or from tuber. Moreover, the history of the seedling also would have an influence on the tuber yield.
- 33 The opposition division agrees with the patentee that objections related to the 200 grams per plant cannot be raised under Article 84 EPC. This wording was in the claim as granted and the tuber yield in the claims as granted also depended on additional factors. Only the expression "plants raised from seedling" is open to an objection under Article 84 EPC.

In view of the data provided in D74, the division can follow the argumentation of the patentee that the plants are distinguishable. While the cotyledons will most likely be lost at a later growth stage, the root system of a seed grown potato plant differs from the root system of a tuber grown plant.

The division therefore finds that the provisions of Article 84 EPC are met.

Article 123(2) EPC

- 34 The opponent raised an objection under Article 123(2) EPC against new claim 1 because of a discrepancy in language between claim 1 and the passage in paragraph [0101] of the application as published (corresponding to page 24, lines 26 to 28 of the application as filed).

The opposition division finds that this linguistic difference does not amount to new subject-matter in the sense of Article 123(2) EPC. Amendments do not need to have a verbal basis in the application as filed.

The opposition division therefore finds that the new first auxiliary claim request is in line with the requirements of Article 123(2) EPC.

Article 54 EPC

- 35 None of the available documents discloses that US-W4 would yield 200 grams of tuber when grown from seedling. Again, novelty cannot be denied based on hypothetical considerations extrapolating the results obtained in D36 for tuber-grown plants.

The claims of the first auxiliary claim request therefore are considered to meet the requirements of Article 54 EPC.

Article 100(b) EPC / Article 83 EPC

- 36 Present claim 1 is directed to a diploid, fertile, self-compatible and essentially homozygous *Solanum tuberosum* potato breeding line comprising plants having an average tuber yield expressed in grams of fresh weight of at least 200 grams per plant when grown from a seedling, wherein plants of said line have a level of homozygosity that is above 75% when testing 100 loci. The claim furthermore specifies a method by which the claimed plants are obtainable, which involves crossing a plant selected from one out of four deposited plants with a second plant, followed by 1 to 8 selfing steps.

- 37 The opposition division finds that the person skilled in the art cannot obtain the plants without undue burden and that based on the teachings of the opposed patent the person skilled in the art has no certainty to succeed (Article 83 EPC).
- 37.1 In order to satisfy the requirements of Article 83 EPC, the application as filed must put the skilled person into possession of at least one way of putting the claimed invention into practice. This is even more important if the invention overcomes a prejudice in the art.
- 37.2 It can be understood from the background of the invention as explained in the description that there was a general believe that diploid true breeding lines of potato cannot be obtained due to inbreeding depression. It was not possible to obtain highly homozygous plants that exhibit good vigour and fertility. The patentee claims to have overcome this prejudice.
- 37.3 The opposition division concurs with the opponent that the opposed patent does not disclose an example of a plant that was produced according to the method of claim 1. The patent does not provide data for plants that have been obtained by further crossing with the deposited plants as provided by step (c) of claim 1.
- 37.4 The division moreover finds that the description does not demonstrate that the prejudice present in the prior art has been overcome for the plants over the whole scope of the claim.

In the breeding scheme leading up to the deposited plants, a *Sli* donor (designated line "H" in figure 2) is crossed with a clone having agronomically desirable characteristics (plants designated "D1", "D2", or "D3"), followed by selfings or backcrossing. It can be understood that only a low proportion of the tested plants were self-compatible (paragraph [0227] of the application as published, p. 49, last paragraph, of the application as filed). In the legend to figure 2 it is stated that "only donor line D2 resulted in the production of a large number of self-compatible plants that would show vigor as defined herein" (paragraph [0063], line 37-38 of the application as published, p. 16, l. 24-26 of the application as filed).

There is no information available that would show that the deposited plants can be crossed with a second potato plant to obtain plants having the required characteristics. The application suggests that crosses were made (paragraph [0218] of the application as published, p. 46, l. 9-13 of the application as filed),

but no data are shown.

The deposited plants are the result of a breeding protocol in which most of the plants did not show the desired characteristics and were discarded. There is no information available in the opposed patent that would suggest that the further crossing with the second potato plant (step (b) of claim 1) would be any easier. The person skilled in the art who attempts to create a plant according to the method laid out in claim 1 thus does not know what happens. The method as defined in the claim in essence is a breeding programme in which only one of the parental plants is characterised. Such methods inherently bear a high level of uncertainty. There is no reasonable expectation of success, and in case of failure the skilled practitioner does not know how to correct in order to obtain the desired plants.

The opposition division therefore finds that the subject-matter of claim 1 cannot be obtained without undue burden (Article 83 EPC).

38 The patentee argued that the patent discloses two deposited lines, AGVD3 and AGVD17, which fall under the terms of the claims. Moreover, reference was made to table 2 which allegedly showed additional plants falling under the terms of the claims. The patent therefore would disclose more than one way of practising the claimed invention.

38.1 Assuming that the information provided in figure 2 is correct, the plants disclosed in table 2 correspond to the deposited plants, with the exception of F1 (H x D3). The division notes, however, that there seem to be some discrepancies between paragraphs [0161] to [0164] of the application as published, and figure 2.

However, the deposited plants are not the same as the claimed plants. In the process as defined in claim 1, the deposited plants are "plant 1" which is crossed with a second plant. The deposited plants are not obtainable by the process of claim 1 and therefore cannot serve as proof that plants according to claim 1 can be obtained.

Moreover, the patent does not demonstrate that plants according to the claims could be obtained by crossing with AGVD1 or AGVD2, which by themselves do not meet the requirements of the claim. It is not known whether these lines

could be developed into a plant according to claim 1, let alone whether this can be achieved by crossing these lines with a second commercial line.

- 39 The patentee furthermore argued that the burden of proof that the claimed plants cannot be obtained was on the opponent.

The opposition division agrees that usually the burden of proof lies on the party who is making an allegation. However, in the present case it seems to be very difficult if not impossible to prove that the claimed plants cannot be obtained. The claimed plants are the result of a series of crossing steps followed by selection (steps (d) and (e) of claim 1). If a negative result is reported, it is not possible to verify whether this is a true problem or whether the selection steps were not properly performed.

If there were a positive example in the opposed patent, one could expect the opponent to provide evidence that the positive example is not reproducible (either as such or with other plants falling under the terms of the claims). However, in the absence of a positive example, the division cannot expect the opponent to start a breeding programme to demonstrate that the claimed plants cannot be obtained.

- 40 The opposition division therefore concludes that the subject-matter of claim 1 does not meet the requirements of Article 83 EPC.

AUXILIARY CLAIM REQUESTS 2 to 4

- 41 The patentee did not wish to discuss auxiliary requests 2 to 4 in detail.

- 42 Auxiliary claim request 2 corresponds to auxiliary claim request 1 as filed on 18.04.2024.

Increasing the level of homozygosity to at least 76% does not render the claimed subject-matter novel over line US-W4. The amendments thus are not suitable to overcome the objections under Articles 54 and 83 EPC as outlined above.

- 43 Auxiliary claim request 3 is not allowable under Article 123(2) EPC. The patentee has introduced a reference to the markers as depicted in table 5 into claims 1, 6, and 11.

However, the 100 markers according to table 5 are disclosed in an example and cannot be combined with the general teaching of the application. The markers of table 5 were selected taking sequence information of the parental clones into account.

- 44 Concerning the fourth auxiliary claim request, the opposition division shares the opponent's view in respect of the allowability under Rule 80 EPC of the amendments made in the auxiliary claim request. To remove the definition of the deposited strains from the claim does not appear to be justified by a ground of opposition.
Moreover, the amendments made with respect to the claims as granted do not overcome the objections raised under Articles 54 and 83 EPC as outlined above.
- 45 Consequently, none of the claim requests on file meets the requirements of the EPC.

Article 106
Decisions subject to appeal

- (1) An appeal shall lie from decisions of the Receiving Section, Examining Divisions, Opposition Divisions and the Legal Division. It shall have suspensive effect.
- (2) A decision which does not terminate proceedings as regards one of the parties can only be appealed together with the final decision, unless the decision allows a separate appeal.
- (3) The right to file an appeal against decisions relating to the apportionment or fixing of costs in opposition proceedings may be restricted in the Implementing Regulations.

Rule 97
Appeal against apportionment and fixing of costs

- (1) The apportionment of costs of opposition proceedings cannot be the sole subject of an appeal.
- (2) A decision fixing the amount of costs of opposition proceedings cannot be appealed unless the amount exceeds that of the fee for appeal.

Rule 98
Surrender or lapse of the patent

The decision of an Opposition Division may be appealed even if the European patent has been surrendered in all the designated Contracting States or has lapsed in all those States.

Article 107
Persons entitled to appeal and to be parties to appeal proceedings

Any party to proceedings adversely affected by a decision may appeal. Any other parties to the proceedings shall be parties to the appeal proceedings as of right.

Article 108
Time limit and form

Notice of appeal shall be filed, in accordance with the Implementing Regulations, at the European Patent Office within **two months** of notification of the decision. Notice of appeal shall not be deemed to have been filed until the fee for appeal has been paid. Within **four months** of notification of the decision, a statement setting out the grounds of appeal shall be filed in accordance with the Implementing Regulations.

Further information concerning the filing of an appeal

- (a) Notice of appeal can be filed in accordance with Rule 1 and Rule 2(1) EPC, by delivery by hand, by post, or by technical means of communication. The filing has to comply with the details and conditions and, where appropriate, any special formal or technical requirements laid down by the President of the European Patent Office (R. 99(3) EPC).
- (b) The addresses of the filing offices of the European Patent Office are as follows:

(i) European Patent Office D-80298 Munich Germany	(ii) European Patent Office Postbus 5818 NL-2280 HV Rijswijk (ZH) The Netherlands	(iii) European Patent Office D-10958 Berlin Germany
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- (c) The notice of appeal must contain the name and address of the appellant in accordance with the provisions of Rule 41(2)(c) EPC, an indication of the decision impugned, and a request defining the subject of the appeal. In the statement of grounds of appeal the appellant shall indicate the reasons for setting aside the decision impugned, or the extent to which it is to be amended, and the facts and evidence on which the appeal is based (R. 99(1) and (2) EPC). The notice of appeal and any subsequent submissions stating the grounds for appeal must be signed (R. 50(3) EPC).
- (d) The fee for appeal is laid down in the Rules relating to Fees. The schedule of fees and expenses of the EPO or a reference to the current version is regularly published in the Official Journal of the European Patent Office under the heading "Guidance for the payment of fees, expenses and prices". Fee information is also published on the EPO website under www.epo.org/fees.

19152162.4

CONSOLIDATED LIST - KONSOLIDIERTE LISTE - LISTE RÉCAPITULATIVE

P: Agventure B.V.

1: J A Kemp LLP

	CITATIONS-ENTGEGENHALTUNGEN-CITATIONS	P	1
D1	Methods, strains and pedigrees of the patent and prior art		D1
D2	Hosaka and Hanneman 1998 Euphytica 103:265-271		D2
D3	Watanabe et al., 1996		D3
D4	Lindhout et al., 2011		D4
D5	Phumichai et al., 2005		D5
D6	Huaman and Spooner, 2002		D6
D7	de Jong et al., 1971		D7
D8	Clot et al., 2020		D8
D9	Applicant's Response to Non-Final Office Action dated 5 May 2020 in related US 16/541,071		D9
D10	Hanneman, 1994		D10
D11	GenBank Acc No.: AEW000000000.1, accessible at https://www.ncbi.nlm.nih.gov/nucleotide/AEW000000000.1		D11
D12	Phumichai et al., 2006		D12
D13	WO 2020/226499 A1		D13
D14	WO 2021/109514 A1		D14
D15	WO 2021/109507 A1		D15
D16	Stockem et al., Contribution and Stability of Yield Components of Diploid Hybrid Potato	D16	
D17	Copy of expert declaration Jan van Loon	D17	
D18	Copy of expert declaration Prof. dr. ir. Evert Jacobsen	D18	
D19	Copy of expert declaration Prof. Jonathan D.G. Jones	D19	
D20	Copy of expert declaration Prof. dr. Maarten Koornneef		
D21	Copy of expert declaration 5 Dr. Sanwen Huang	D21	
D22	Adams et al., Little heterosis found in diploid hybrid potato: the genetic underpinnings of a new hybrid crop	D22	
D23	Stokstad, The New Potato – Science, Vol. 363, Issue 6427 pages 574 - 577	D23	
D24	Inventory of Tuber-bearing Solanum Species, Catalogue of Potato Germplasm, 1993		D24
D25	Silva, J.V., et al. (2017), Yield gaps in Dutch arable farming systems: Analysis at crop and crop rotation level, Agricultural Systems, 158: 78-92		D25
D26	Potatoes 2008 Summary, NASS, USDA		D26
D27	Potatoes 2009 Summary, NASS, USDA		D27

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D28	Potatoes 2010 Summary, NASS, USDA		D28
D29	Potatoes 2011 Summary, NASS, USDA		D29
D30	Potatoes 2012 Summary, NASS, USDA		D30
D31	Copyright page and page 259 of Introductory Plant Biology, 11th Ed., Stern, Bidlack & Jansky, 2008, ISBN 978-0-07-283067-5		D31
D32	Potatoes 2014 Summary, NASS, USDA		D32
D33	Potatoes 2017 Summary, NASS, USDA		D33
D34	Printed copy of the U.S. National Plant Germplasm System entry for PI 675351, <i>Solanum tuberosum</i> L., 'RH89-039-16', accessible at: https://npgsweb.ars-grin.gov/gringlobal/accessiondetail?id=1660370		D34
D35	Manrique-Carpintero, N.C., <i>et al.</i> (2015), Genetic Map and QTL Analysis of Agronomic Traits in a Diploid Potato Population using Single Nucleotide Polymorphism Markers. <i>Crop Science</i> , 55: 2566-2579		D35
D36	A first expert declaration from Prof Shelley Jansky (Professor Emeritus at University of Wisconsin-Madison) regarding line US-W4, also including an Exhibit A and a curriculum vitae		D36
D37	A second expert declaration from Prof Shelley Jansky (Professor Emeritus at University of Wisconsin-Madison) regarding line RH89, also including a curriculum vitae		D37
D38	An expert declaration from Prof David Douches (Professor, Director of Potato Breeding and Genetics Program, Michigan State University), also including an Exhibit A and a curriculum vitae		D38
D39	Felcher <i>et al.</i> (2012), Integration of Two Diploid Potato Linkage Maps with the Potato Genome Sequence. <i>PLOS ONE</i> 7(4): e36347		D39
D40	Hamilton, J.P., <i>et al.</i> (2011) Single nucleotide polymorphism discovery in elite north american potato germplasm. <i>BMC Genomics</i> 12(302)		D40
D41	Vos PG, <i>et al.</i> (2015) Development and analysis of a 20K SNP array for potato (<i>Solanum tuberosum</i>): an insight into the breeding history. <i>Theor Appl Genet.</i> 128(12):2387-401		D41
D42	Manrique-Carpintero NC <i>et al.</i> (2016) Comparative Analysis of Regions with Distorted Segregation in Three Diploid Populations of Potato. <i>G3 (Bethesda)</i> . 6(8):2617-28		D42
D43	Hirsch <i>et al.</i> , (2013) Retrospective view of North American potato (<i>Solanum tuberosum</i> L.) breeding in the 20th and 21st centuries. <i>G3 (Bethesda)</i> . 3(6):1003-13		D43
D44	an expert declaration from Professor Rodomiro Ortiz (Chair Professor of Genetics and Plant Breeding, Swedish University of Agricultural Sciences, Alnarp, Sweden), also including a curriculum vitae;		D44
D45	Food and Agriculture Organization of the United Nations, <i>International year of the potato 2008, New light on a hidden treasure, an end-of-year review</i> , Rome 2009;		D45
D46	Buso, J.A., <i>et al.</i> (2003) Tuber yield and quality of 4x-2x (FDR) potato progenies derived from the wild diploid species <i>Solanum berthaultii</i> and <i>Solanum tarijense</i> . <i>Plant Breeding</i> , 122: 229-232;		D46
D47	Hutten, R.C.B., <i>et al.</i> (1995) Comparative performance of diploid and tetraploid progenies from 2x.2x crosses in potato. <i>Euphytica</i> 81: 187–192;		D47

	CITATIONS-ENTGEGENHALTUNGEN-CITATIONS	P	1
D48	Maris, B. (1990) Comparison of diploid and tetraploid potato families derived from <i>Solanum phureja</i> x dihaploid <i>S. tuberosum</i> hybrids and their vegetatively doubled counterparts. <i>Euphytica</i> 46: 15–33;		D48
D49	The Potato Genome Sequencing Consortium. (2011) Genome sequence and analysis of the tuber crop potato. <i>Nature</i> , 475: 189–195		D49
D50	G. Acquaah, Principles of Plant Genetics and Breeding, Second Edition, 2007, p. 119 and 339;		D50
D51	Maine, M. (1995). The effect of inbreeding on the parental values of potato dihaploids. <i>Annals of Applied Biology</i> . 127: 151 – 156;		D51
D52	Chase, S. (1963) ANALYTIC BREEDING IN SOLANUM TUBEROSUM L. – A SCHEME UTILIZING PARTHENOTES AND OTHER DIPLOID STOCKS. <i>Canadian Journal of Genetics and Cytology</i> . 5(4): 359-363;		D52
D53	English Machine Translation of the Expert Statement Joep Lambalk dated 4 March 2024, submitted into Dutch infringement proceedings by Solynta on behalf of the Patentee on 6 March 2024; and		D53
D54	Birhman, R. K., & Hosaka, K. (2000) Production of inbred progenies of diploid potatoes using an S-locus inhibitor (Sli) gene, and their characterization. <i>Genome</i> , 43(3), 495–502		D54
D55	Van den Berg en Jacobs, 2007	D44	
D56	Bates, 1935	D45	
D57	Cipar, 1964	D46	
D58	Cipar et al., 1967	D47	
D59	Peloquin and Hougas, 1960	D48	
D60	Plant Inventory Books _ USDA ARS	D49	
D61	PI Nos. 675347-675351 GRIN	D50	
D62	GRIN Plant Inventory 2004 Nos. 634361 – 636444	D51	
D63	PI 675351 GRIN-Global	D52	
D64	Jansky Lab Presentation 2018	D53	
D65	Braun et al., 2017	D54	
D66	Potato Pedigree Database - RH89-039-16	D55	
D67	Yarwood, 1946	D56	
D68	Heiken, 1958	D57	
D69	Larkin, 1981	D58	
D70	Ellis et al., 2018	D59	
D71	Seedling definition and Meaning Merriam Webster	D60	
D72	Kacheyo et al. 2020	D61	
D73	Vreugdenhil 2007 pp 219-221	D62	
D74	Differences between potato plants raised from seedling and tuber	D63	
D75	Declaration of Mr. Ron van der Hulst	D64	
D76	Second declaration of Dr Shelley Jansky		D76
D77	Second declaration of David Douches		D77
D78	NPGS Catalog of Potato Germplasm 1993 (coversheet and selected pages);		D78
D79	Marand et al, Genetics 212, 317-332 (2019);		D79

	CITATIONS-ENTGEGENHALTUNGEN-CITATIONS	P	1
D80	NPGS Catalog of Potato Germplasm 1996 (coversheet and selected pages);		D80
D81	USDA-ARS Germplasm Resources Information Network (GRIN) availability details for GS 2 (US-W4), available from https://npgsweb.arsgrin.gov/gringlobal/accessiondetail?id=1000069 ; and		D81
D82	Hirsch et al, G3 (Bethesda) 3(6), 1003-1013 (2013)		D82



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Application No. / Patent No. 19 152 162.4 - 1111 / 3 536 146 / 01	Ref. Q40398EP	Date 01.08.2024
Proprietor Agventure B.V.		

Provision of a copy of the minutes in accordance with Rule 124(4) EPC

The attached copy of the minutes of the oral proceedings is sent to you in accordance with Rule 124(4) EPC.



Penney, Karen
Formalities Officer
Tel. No.: +49 89 2399 - 7914

Enclosure(s): Copy of the minutes (Form 2309)

Application No.:

19 152 162.4

Patent No.:

EP-B-3 536 146

Minutes of the oral proceedings before the OPPOSITION DIVISION

The proceedings were public.

Proceedings opened on 18.06.2024 at 09:00 hours

Present as members of the opposition division:

Chairman:	Mundel, Christophe
1st member:	Bilang, Jürg
2nd member:	Keller, Yves
Minute writer:	Keller, Yves

Present as or for the party or parties:

- For the Proprietor(s): Agventure B.V.
F. Schut (representative), F. Michaels (representative), K. Bijwank (representative at Brinkhof), Mr. Kruyt (CFO of Solynta), Mr Van der Vossen (R&D director at Solynta), Ms W. Ubing (legal counsel at Solynta), Mr. Ron van der Hulst (senior scientist, Solynta).
- For the Opponent 1: J A Kemp LLP
Mr. Nicholls (representative), Mr. Bentham (representative)

Essentials of the oral proceedings and relevant statements of the parties:

- The Chairman (C) opened the oral proceedings at 0900.
- C asked the parties to introduce the accompanying persons.
- The parties introduced said persons
- C gave a resume of the requests on file and asked the parties if it was correct and if they had further request.
- The proprietor (P) acknowledged the requests of his written submission and further requested D44-D54 not to be admitted into the proceedings and if however said documents would be allowed, the proceedings to be adjourned as he had not enough time to respond to the "prior use" objection newly introduced by the opponent (O).
- O acknowledged the requests of his written submission and had no further request.
- C declared that compliance with Art. 123(2) EPC of the main request (MR) will be discussed
- O argued, in addition to the arguments presented in writing, that the preamble of claim 1 did not find a basis in p.21 or p.31, but features of both page had to be combined which resulted in combination from 2 lists. O argued that, in line with T1621/16 the requirements of 123(2) EPC are not met.
Moreover O was of the opinion that step (e) of claim 1 did not find a basis in page 38 of the application as filed since a different, non equivalent, wording being used (vigour vs fertility). Finally O argued that p37 was too generic for being a basis for said step.
- P was of the opinion that it there was clearly no selection from 2 lists, further there was a clear pointer in the paragraph bridging p.30/p.31.
- C interrupted the proceedings at 0935 for deliberation and resumed the proceedings at 0950.
- C announced that the MR meets the requirements of Art. 123(2) EPC, and that the admissibility of D44-D88 will be discussed, before discussing Art. 54 EPC. Moreover C informed P that the opposition division (OD) was of the opinion that no new objection for "prior use" was introduced by O but public availability was addressed.
- P was of the opinion that the objection raised in conjunction with the filing of D44-D54 were not present in the notice of opposition. Further P commented that D36, D37 disclose no experiments on selfing and inconsistencies can be found when comparing the teaching of D76-D79. P concluded that O failed to provide evidence that the plant (US-W4) disclosed by D7 was publicly available. In support P cited T2003/08. Furthermore P was of the opinion that in D77 the stability of the plant was not proven. Stability being a problem as one can not with certainty say which phenotype a plant had at the relevant date, said plant being potentially subjected to mutation, epigenetics, viral infections.

- O responded that the D24-D82 having been filed at different times their admissibility should be discussed individually.

The documents are all prima facie relevant and filed in support of previously raised objections, D24-D43 in support objection raised under Art. 54 EPC based on D7, D36-D37 in support to objection raised under Art. 54 EPC, D44-D54 were cited in response to comments made by the OD and D76-D82 in response to arguments by P.

Further O was of the opinion that T2008/03 is not relevant in the present case said decision discussing "oral disclosures".

- OD asked to O what his position is in regard to the request of adjournment.

- On O request, C interrupted the proceedings at 1025, and resumed the proceedings at 1030.

- O responded that he would not oppose an adjournment of the proceedings.

- The parties went on in a lengthy argumentation on the public availability, defined as prior use by P, of the line US-W4 of D7, the level of evidence provided in the cited documents in particular D7, D8, D76, D77.

- After the parties had presented all their arguments C interrupted the proceedings at 1055 for deliberation and resumed the proceedings at 1125.

- C announced that all the documents D44-D82 are allowed into the proceedings, the request for adjournment is rejected, and the now the novelty should be discussed.

- O presented essentially the same arguments as submitted in writing, that the claim 1 of the MR is not novel in view of US-W4 disclosed in D7 and D8, technical features which were confirmed in D76, D77, D88, D36, D37 and D78 confirming that the line US-W4 was publicly available at the priority date.

- P also argued the same arguments as submitted in writing, that the following features: level of homozygosity, yield, self compatibility as claimed were not proven nor shown in the documents cited by O. Moreover P was of the opinion that the yield as defined in the present application was different from the yield as defined in the cited documents, which renders a comparison impossible. P also argued that at the relevant date the artisan skilled in the art was not aware of the technical feature of US-W4. In particular P argued that D76, D77 are not sufficient proof as said document being mere declaration of experts.

- C interrupted the proceedings at 1310 and resumed the proceedings at 1415.

- OD asked O to specify the basis for the allegation that the US-W4 is self compatible.

- O explained that the results of D76 prove that US-W4 was self compatible and fertile offspring could be obtained therefrom. Moreover there were no statement in D57 and D58 that US-W4 was not self compatible.
- P questioned the conclusion of O vis a vis D76.
- C interrupted the proceedings at 1440 for deliberation and resumed the proceedings at 1455.
- C announced that C1 of the MR does not meet the requirements of Art. 54 EPC.
- OD informed P that it was of the opinion that C1, AR3 could overcome said objection.
- C interrupted the proceedings at 1500 to enable P to reflect on how to proceed and resumed the proceedings at 1505.
- P announced that he maintained all the requests however changing their order as follows: auxiliary request 1 (AR1) becomes new auxiliary request 2 (NAR2) and auxiliary request 2 (AR2) becomes new auxiliary request 1 (NAR1). P requested to continue the proceedings by examining NAR1.
- As O had no objection on the admissibility of NAR1, C announced that NAR1 was admissible.
- O objected C1 of NAR1 and presented essentially the same arguments as submitted in writing, the wording "raised from seedling" being a product by process, and that in presence of a plant the skilled artisan was not in a position to know if the plant was raised from a tuber or seedling, thus rendering the scope of the claim unclear.
- P responded that the artisan skilled in the art could indeed make the difference between a plant raised from a tuber (a) and a plant raised from a seedling (b) , (a) having a remnant mother tuber absent from (b) and (b) having cotyledons which are absent from (a).
- C interrupted the proceedings at 1540 for deliberation and resumed the proceedings at 1545.
- C announced that NAR1 meets the requirements of Art. 84 EPC.
- O argued that NAR1 does not meet the requirements of Art. 123(2) EPC as no clear basis could be found on on page 24 of the application as filed but could be found only by combining several passages.
- P declared that clear basis could be found p. 24 I. 26-28 and table 2 (p. 48) of the application as filed.
- O responded that the language used in NAR1 was different from that used in the application as filed moreover the basis on p. 48 could not be generalized said feature coming in a very specific example.

- After the parties had presented all their arguments C interrupted the proceedings at 1555 for deliberation and resumed the proceedings at 1600.
 - C announced that NAR1 meets the requirements of Art. 123(2) EPC, now the novelty of NAR1 should be discussed.
 - P was of the opinion that NAR1 is novel, as the present claimed subject matter is directed to plants obtained from seedling whereas the cited prior art only discloses plants obtained from tubers as discussed previously.
 - O was of the opinion that the claim was anticipated by the disclosure of D7 and D36, in particular D36 disclosing a plant obtained from a tuber having over 700g. That is, in accordance with the present patent stating that plants obtained from a tuber may weight 50%-200% more than a plant obtained from a seedling, said plant if obtained from a seedling would probably weight over 200g and thus fall under the scope of claim 1 of NAR1.
 - After the parties had presented all their arguments C interrupted the proceedings at 1615 for deliberation and resumed the proceedings at 1620.
 - C announced that NAR1 meets the requirements of Art.54 EPC, now compliance with the requirements of Art. 83 EPC will be addressed.
 - The proceedings were interrupted by C at 1625 and resumed at 1630.
 - O argued that in writing P asserted that the skilled artisan would not have reasonable expectation of success to arrive to the claimed subject matter when responding to the objection of lack of inventive step, hence one must conclude that the artisan skilled in the art could not reproduce the presently claimed invention. Moreover the O argued that there was no evidence in the present patent that the claimed plant was ever obtained. In support of his line of argumentation O cited T792/00.
 - P responded that there was clear evidence in the patent, e.g p.18, line AGVD 17 which was deposited and figure 2, that the claimed plants can be obtained following the teaching of the patent, moreover P was of the opinion that O did not present verifiable facts underlying his arguments.
 - O pointed that the claimed subject matter requested the use of lines D1, D2 or D3 and not D17.
 - P reiterated that the O did not present any verifiable facts for his allegation and table 2, figure 2, clearly showed that the claimed subject matter could be reproduced in particular the present invention overcame the inbreeding depression.
 - After the parties had presented all their arguments C interrupted the proceedings at 1655 for deliberation and resumed the proceedings at 1715.
 - C announced that NAR1 does not meet the requirements of Art.83 EPC.
-

Datum
Date 01.08.2024
Date

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Sheet 5
Feuille

Anmelde-Nr:
Application No: 19 152 162.4
Demande n°:

- P requested the OD to briefly explain the reasoning why the OD decided that the NAR1 did not meet the requirements of Art. 83 EPC
- OD responded that there was no single example given clearly showing that the claimed plants could be obtained without undue burden.
- C interrupted the proceedings at P's request at 1715 and resumed the proceedings at 1730.
- P declared that he maintains all the request on file and will not file a further request. P requested OD to give a brief decision on NAR2, AR3 and AR4.
- O had no further request.
- C interrupted the proceedings at 1735 and resumed the proceedings at 1745.
- C announced that:
NAR2 did not meet the requirements of Art. 54 EPC and Art. 84 EPC,
AR3 did not meet the requirements of Art. 123(2) EPC and Art. 83 EPC
NR4 is not admissible under Rule 80 EPC and notwithstanding the latter said request would not meet the requirements of Art. 54 EPC and Art. 83 EPC.
- All the parties had no further comments, and expressed that all their request had been addressed.
They also declared that the proceedings were under good technical conditions.
- C announced that the patent is revoked (Art. 103(b) EPC), informed the parties that minutes and the decision will be transmitted as soon as possible, and that this decision is appealable.
- C closed the proceedings at 1750.

The chairman **closed the oral proceedings** on 18.06.2024 at 17:45 hours.

signed:

Mundel, Christophe
.....
Chairman

Enclosure(s):



signed:

Keller, Yves
.....
Minute Writer