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Case Number: T 1988/12 - 3.3.04

Application Number: 06784681.6

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Language of the proceedings: EN

Title of invention:
Sclerotinia-resistant Brassica and methods for development of resistance to sclerotinia

Applicant:
Pioneer-Hi-Bred International, Inc.

Headword:
Sclerotinia-resistant Brassica/PIONEER

Relevant legal provisions:
EPC Art. 84, 111(1)

Keyword:
Main and auxiliary requests 1 and 2 - clarity (no)

Decisions cited:
T 0150/82, G 0002/88, G 0010/93, T 0967/10, G 0002/12

Catchword:

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Case Number: T 1988/12 - 3.3.04

D E C I S I O N
of Technical Board of Appeal 3.3.04
of 10 November 2016

Appellant: (Applicant)	Pioneer-Hi-Bred International, Inc. 7100 N.W. 62nd Avenue P.O. Box 1014 Johnston, IA 50131-1014 (US)
Representative:	Bentham, Andrew J A Kemp 14 South Square Gray's Inn London WC1R 5JJ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 5 April 2012 refusing European patent application No. 06784681.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman	G. Alt
Members:	A. Chakravarty
	M. Blasi

Summary of Facts and Submissions

I. The appeal lies from the decision of the examining division refusing European patent application No. 06784681.6 entitled "*Sclerotinia-resistant Brassica and methods for development of resistance to Sclerotinia*".

II. The examining division considered a main and an auxiliary request, holding that the subject-matter of the identical claims 1 to 3 and 7 to 8 of the main and auxiliary requests lacked support in the description (Article 84 EPC) and that the invention was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 83 EPC).

III. With the statement of grounds of appeal, the appellant submitted a main and four auxiliary requests with the main and first auxiliary request being identical to those considered by the examining division. Also submitted with the statement of grounds of appeal were two declarations, one from inventor Dr J. Patel and one from inventor Dr I. Falak.

IV. Claim 1 of the main request and of auxiliary requests 1 and 2 reads as follows:

"1. A progeny plant obtainable by a method comprising:

(a) crossing a plant that

(i) has a spring growth habit and is of a line deposited as ATCC accession number PTA-6776, PTA-6779, PTA-6777, PTA-6781, PTA-6780, or PTA

6778; or as NCIMB accession number 41388, 41389, 41390, or 41391; or

(ii) has a winter growth habit and is of a line deposited as NCIMB accession number 41392, 41393, 41394, 41395, 41396, 41397, or number 41398;

with another *Brassica* plant to yield seed;

(b) growing the *Brassica* seed of step (a) to yield a derived plant; and

(c) optionally repeating the crossing and growing of steps (a) and (b) for successive generations to produce further plants derived from said *Brassica* plant;

or

(a) producing progeny of a plant that

(i) has a spring growth habit and is of a line deposited as ATCC accession number PTA-6776, PTA-6779, or PTA-6777; or as NCIMB accession number 41388 or 41389; or

(ii) has a winter growth habit and is of a line deposited as NCIMB accession number 41392, 41393, 41394, 41395, 41396, 41397, or number 41398

by doubled haploidy;

and

(d) selecting a descendent plant, wherein

(a) a solid component of the seed of the progeny plant comprises a glucosinolate level of less than 30 µmoles per gram of oil-free solid;

(b) oil of the seed of the progeny plant comprises less than 2% erucic acid;

(c) said progeny plant has a 50% flowering time of between about 30 to 90 days; and

(d) said progeny are representative of a population having an SSDI % score which is less than about 60% of the SSDI% score,

in the case of a spring growth habit, of Pioneer Hi-Bred variety 46A65 or 46A76 or of the mean SSDI% score of the two varieties,

or in the case of a winter growth habit, of the variety Columbus, or of the variety Express, or of the mean SSDI% score of the two varieties,

under the same environmental and disease conditions in the field."

Claim 1 of auxiliary requests three and four relates to a method of screening in the field for resistance of a plant to *Sclerotinia.*

V. The board issued a communication pursuant to Article 15(1) RPBA, setting out its preliminary appreciation of substantive and legal matters

concerning the appeal. In particular, the board, of its own motion, raised an objection of lack of clarity (Article 84 EPC) to claim 1 of the main and auxiliary requests 1 and 2. This objection included, *inter alia*, the board's preliminary view that the skilled person, reading the process features of claim 1 in the light of common general knowledge and of the description of the application (see pages 5, line 35 to page 9, line 6), would understand that the invention related to *Brassica* plants, which had in their genome genetic information responsible for improved resistance to *Sclerotina sclerotiorum*, that (genetic information) was, at least in part, as found in the genome of a plant of which seed was deposited with the American Type Culture Collection (ATCC) and with the NCIMB. However, the board considered that skilled person could not derive from the claim *per* se or from the application as a whole the structural or informational nature of this genetic information in terms of, e.g. its sequence or genetic markers for its identification. Neither the description, the skilled person's common general knowledge nor the deposit numbers conveyed such information. Consequently, it was unknown what the genetic information present in the genome of the claimed plants was. In this context, the board cited decision T 967/10 (reasons 2 to 9), in which a claim to a plant characterised by process features with reference to deposited seed had been held to be unclear. Furthermore, the board informed the appellant that, should it hold said requests not to comply with the requirements of the EPC, it envisaged remitting the case to the examining division for further prosecution.

VI. The appellant responded to the board's communication and also submitted a second declaration by the inventor Dr J. Patel.

VII. Oral proceedings before the board were held on 10 November 2016. At the end of these proceedings the Chairwoman announced the decision of the board.

VIII. The appellant's arguments relevant to the decision can be summarised as follows:

Main and auxiliary requests 1 and 2

Claim 1

Article 84 EPC - Clarity

Compliance with Article 84 EPC required "*neither the sequences responsible for the trait nor, for example, molecular marker information that locates the trait in the genome*". In fact, the claim was "*clear if a skilled person (i.e. a plant breeder in this case), can determine whether or not a candidate plant falls within its terms*".

That this was presently the case was confirmed by Dr Patel's second declaration, in which he stated that a candidate plant could be phenotyped using screening in-the-field techniques. For example the method of claims 9 to 15 of the main request had increased sensitivity that had enabled the inventors to identify the trait of the invention in the first place. This screening method allowed plants lacking the phenotypic characteristics of the invention, especially the SSDI % score, to be excluded.

Dr Patel also confirmed that in order to determine whether a potentially infringing plant fell within the ambit of the claim, a plant breeder would check the pedigree of the candidate plant via breeding/screening/

phenotyping records. As all breeders kept such records, this check would resolve the question in many cases as it would be possible to see if a candidate plant was ultimately derived from the deposited germplasm. Moreover, no independent sources of the same resistance trait were known, thus any plant exhibiting the trait could strongly be presumed to constitute claimed subject-matter. Finally, a breeder would also be able to determine molecular markers characteristic of the trait of the invention by accessing the deposited germplasm and testing it, then comparing the pattern of markers to that of a candidate plant, a procedure described by Dr Patel as "*simple and straightforward*".

Although the form of the claim was very similar to that used in the case underlying decision T 967/10, the underlying technical facts were different. In contrast to the situation in that case, the phenotype of the plants now claimed was tightly defined by reference to the SSDI % score and was new, having been identified by the inventors using their newly developed screening-in-the field process. Even today, no other genetically independent source of the same resistance was known (see the second declaration of Dr. Patel, item 4, final sentence).

The trait of the invention was not simply a "black box" whose origin was wholly unexplained. Instead its origin was conveyed in terms of the inventors' understanding of its genetics at the time of filing rather than its molecular biology or genomic (e.g. marker-defined) position. At page 54, line 1 of the description, the inventors stated that "*it is estimated that three or four genes are conferring partial resistance in these materials*". Thus no simple parallel could be drawn to

decision T 967/10 and the findings in that case did not compel an analogous finding of lack of clarity.

IX. The appellant requested that the decision of the examining division be set aside and that a patent be granted on the basis of the claims of the main request or alternatively on the basis of one of auxiliary requests 1 to 4, all filed with the statement of grounds of appeal.

Reasons for the Decision

The invention

1. The invention disclosed in the application relates to *Sclerotinia sclerotiorum* resistant *Brassica* plants (see for instance, page 1, paragraph 1 of the application as filed).

Main and auxiliary requests 1 and 2

Claim 1

Article 84 EPC - Clarity

2. In an appeal relating to a decision of an examining division refusing a European patent application, the board of appeal has the power to examine whether the application or the invention to which it relates meets the requirements of the EPC. Hence the board can consider requirements that the examining division did not take into consideration in the examination proceedings or which it regarded as having been met (decision G 10/93, OJ EPO 1995, 172, Headnote). The objections under Article 84 EPC below were raised in view of Article 111(1) EPC.

3. The subject-matter of claim 1 is a *Brassica* plant characterised solely by a process by which it is obtainable. In one alternative, the process comprises crossing a plant that has a spring or winter growth habit and is of a line deposited as one of the recited ATCC or NCIMB accession numbers with another *Brassica* plant to yield seed, followed by growing that *Brassica* seed to yield further plants, then, from these, selecting a descendent plant having the phenotypic traits (a) to (d), where (a) to (c) represent the traits characteristic of canola and (d) represents the *Sclerotinia* resistance trait (see section IV., above). The claim is therefore a so-called product-by-process claim (Case Law of the Boards of Appeal of the European Patent Office, "CLBA", 8th edition 2016, II.A.7.1).

4. According to the established case law of the boards, product-by-process claims are considered to be directed to the product as such, in which a process instead of, for example, its structure or composition, is used to define a feature or features of the product (see for example, G 2/12, OJ EPO 2016, A27, reasons IV (2) and (5); T 150/82, OJ EPO 1984, 309, reasons 10).

5. All claims, including claims drafted in the product-by-process style, must fulfil the clarity requirement of Article 84 EPC.

6. Article 84 EPC stipulates, *inter alia*, that "*the claims shall define the matter for which protection is sought*" and that "*they shall be clear*". The purpose of claims under the EPC is to enable the determination of the protection conferred by the patent or patent application (Article 69 EPC) and thus the rights of the patent owner within the designated contracting states (Article 64 EPC), having regard to the patentability

requirements of Articles 52 to 57 EPC. Therefore, the claimed subject-matter must be defined so that the public is left in no doubt about what the subject-matter for which protection is sought actually is (cf. CLBA, *supra*, II.A 1.1 and decision G 2/88, OJ EPO 1990, 93, reasons 2.5).

7. In the case of claims to a product drafted in a product-by-process style, the requirement of Article 84 EPC that the claims be clear has the aim of ensuring that the skilled person is able to determine, either from the claim alone, or by construction of the claim in the light of the description, or by construction in the light of the skilled person's common general knowledge, which identifiable and unambiguous technical features are imparted to the product by the process through which it is defined.

8. It was not disputed by the appellant that, as a consequence of the process features, the subject-matter of claim 1 includes *Brassica* plants whose phenotype corresponds to the selection criteria (a) to (d) set out in selection step (d) of claim 1 and which phenotype is due to the presence in their genome of genetic information identical to that present in the genome of seeds deposited with the ATCC or the NCIMB whose accession numbers are recited in step (a) of claim 1.

9. On the subject of clarity of claim 1, the appellant argues *inter alia* "*that neither the sequences responsible for the trait nor, for example, molecular marker information that locates the trait in the genome, are required for compliance with Article 84 EPC*" and that "*the claim is clear if a skilled person, (ie a plant breeder in this case) can determine whether*

or not a candidate plant falls within its terms" (see section VIII., above).

10. While the board agrees that Article 84 EPC does not prescribe any particular way of meeting its requirement for clarity, it cannot agree that the claim is necessarily "*clear if a skilled person (ie a plant breeder) can determine whether or not a candidate plant falls within its terms*". Such an approach requires that to understand the claim, the skilled person be in possession of a candidate plant so that this candidate plant can, for example, be phenotyped or have its breeding pedigree checked, as proposed in the second Patel declaration. In the board's view, the suggestion that the skilled person has to rely on an analysis of a potentially infringing product to know what the subject-matter for which protection is sought actually is, runs counter to the purpose of Article 84 EPC (see point 6., above). It is true that, in the course of the assessment of the clarity of a claim, the boards sometimes consider the question of whether or not the claimed subject-matter is defined in such a way as to allow a third party, such as a potential infringer, to determine whether or not he is working in the scope of the claim, but only as a secondary consideration (cf. decision T 967/10, reasons 14).

11. Thus, the board considers it necessary to determine the technical information that is conveyed by the feature of the presence in the genome of the claimed plants of genetic information identical to that present in the genome of the deposited seeds.

12. It is undisputed that the skilled person cannot derive from the claim *per se* the explicit structural or informational nature of this genetic information, in

terms of, e.g. its sequence or genetic markers for its identification. Neither the description, the skilled person's common general knowledge nor the deposit numbers, convey such information.

13. Consequently, the process through which the claimed plant is defined does not impart identifiable and unambiguous technical features to it and in particular, the genetic information present in the genome of the claimed plants is unknown. Thus at least one of the characterising technical features imparted to the claimed plants by the process is unknown and claim 1 is therefore considered as unclear.

14. In its communication pursuant to Article 15(1) RPBA, the board referred to decision T 967/10 as relating to a similar factual and legal situation as the case under appeal. The appellant did not agree, arguing that the facts of the present case differed (see sections V. and VIII., above).

15. The board, however, is of the view that the factual situation in the present case closely parallels that underlying decision T 967/10. In that case, the responsible board also held a claim to a plant characterised by process features with reference to deposited seed to be unclear (*Id.*, reasons 2 to 9). The fact that plants having a similar phenotype were known in the prior art was only a secondary consideration in that case, the primary one being the unknown nature of the genetic information present in the genome of the claimed plants (*Id.*, reasons 10 and 11).

16. In view of the above considerations, the board concludes that claim 1 of the main and auxiliary

requests 1 and 2 lacks clarity and thus does not fulfil the requirements of Article 84 EPC.

Auxiliary requests 3 and 4

Remittal - Article 111(1) EPC

17. Auxiliary requests 3 and 4 do not comprise the claims held unclear above. Instead, the claims of these requests relate to a method of screening in the field for resistance to *Sclerotinia*. In its decision, the examining division gave no opinion on whether this subject-matter meets the requirements of the EPC.

18. In order not to deprive the applicant of the possibility of having its case considered by two instances and as indicated in its communication pursuant to Article 15(1) RPBA, the board finds it appropriate to make use of its powers under Article 111(1) EPC and to remit the case to the examining division for further prosecution.

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 for further prosecution.

The Registrar: The Chairwoman:

P. Cremona G. Alt

Decision electronically authenticated