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Datasheet for the decision of 22 September 2006

Case Number: T 0794/04 - 3.3.09

Application Number: 99956363.8

Publication Number: 1128737

IPC: A23K 1/16

Language of the proceedings: EN

Title of invention:
Growth enhancers

Applicant:
BORREGAARD INDUSTRIES LIMITED

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (yes - after amendment)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0794/04 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 22 September 2006

Appellant: BORREGAARD INDUSTRIES LIMITED
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 15 January 2004 refusing European application No. 99956363.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P. Kitzmantel
Members: J. Jardón Alvarez
W. Sekretaruk

Summary of Facts and Submissions

I. This appeal lies from the decision of the Examining Division, issued in writing on 15 January 2004, refusing European patent application No. 99 956 363.8, published as WO - A - 00/27220.

II. The decision under appeal was based on a set of eight claims filed with letter dated 17 October 2003.

Independent Claims 1, 5 and 7 read as follows:

"1. Growth enhancing additive for compound feed, characterized in that it contains an organic or inorganic acid, or salts thereof, with a beneficial effect on the digestive system, and a spent sulphite liquor from an acidic or neutral cellulose sulphite cooking, wherein the spent sulphite liquor has a pH in the range of 1 to 10, and the base used to produce the spent sulphite liquor is calcium, sodium, ammonia or magnesium, and the additive contains the organic or inorganic acid, or salts thereof, in an amount ranging from 10-90 percentage weight, and the spent sulphite liquor from an acidic or neutral cellulose sulphite cooking in an amount ranging from 10-90 percentage weight, wherein the acid and the acidic or neutral cellulose spent sulphite liquor is optionally adsorbed on an suitable carrier in order to obtain a dry substance.

5. Compound feed, characterized in that it contains the additive in accordance with claims 1-4 in an amount ranging from 0,2 to 3,0%, preferably from 0,4 to 1,5%, and more preferably from 0,6 to 1,0%.

7. The use of an additive in accordance with claims 1-4 in the manufacture of compound feed for pigs, sheep, goats, poultry, cattle, horses, dogs, cats and fur-bearing animals."

III. The Examining Division refused the application, because the subject-matter of independent Claims 1, 5 and 7 was considered not new according to Article 54(1)(2) EPC having regard to the disclosure of document D1.

D1: EP - A - 0 028 535

In the opinion of the Examining Division, Claims 1 to 3 of D1 already disclosed the claimed additives in all their essential aspects.

Functional features in Claim 1 of the application like those that the additive was a growth enhancing additive or that it had a beneficial effect on the digestive system were held to be of no relevance for examining the novelty of a claim directed to a product.

The Examining Division further pointed out that even if the subject-matter could be considered novel, it would lack inventive step having regard to the disclosure of D1 and/or

D2: EP - A - 0 043 202

because both documents provided the teaching that treatment of any feeding stuff with additives comprising sulphite liquid or lignin sulphonate and

acids improved the efficiency with which the animals convert nutrients for the purpose of maintenance.

IV. The Notice of Appeal was filed on 8 March 2004 and the appeal fee was paid on the same day. The Statement setting out the Grounds of Appeal was filed on 25 May 2004. Therein the Appellant relied on two sets of amended claims as main and auxiliary requests.

V. On 24 May 2006 the Board dispatched the summons to attend oral proceedings. In the annexed communication pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal, the Board indicated that the subject-matter of the claims according to both the main and the auxiliary request extended beyond the content of the application as originally filed (Article 123(2) EPC).

VI. With a letter dated 22 August 2006, the Appellant filed sets of claims for seven new requests, a main request and six auxiliary requests.

VII. During the oral proceedings held on 22 September 2006, the Appellant withdrew its previous main request and maintained as only request the set of claims according to the first auxiliary request filed with the letter dated 22 August 2006.

Claim 1 of this request reads as follows:

"1. The use of an additive containing an organic or inorganic acid selected from formic acid, acetic acid, propionic acid, citric acid, hydrochloric acid, phosphoric acid, or mixtures thereof, or salts of the

selected organic or inorganic acids, and a spent sulphite liquor from an acidic or neutral cellulose sulphite cooking, in the manufacture of compound feed for enhancing the growth of pigs, sheep, goats, poultry, cattle, horses, dogs, cats or fur-bearing animals."

VIII. The arguments put forward by the Appellant can be summarized as follows:

- The subject-matter of the amended claims directed to the use for enhancing the growth of animals was novel because such use was not disclosed in D1 or D2. No weight increase was reported for the animals used in the examples of D1 or D2, the only information given being that the palatability of the food was good.

- Concerning inventive step, the Appellant considered the use of formic acid alone as growth enhancer additive as the closest prior art. The problem to be solved by the application was to further improve said growth enhancing effect. Example 1 of the application showed the synergistic effect on the growth of pigs of the use of the additive according to the invention. The use of an additive comprising formic acid and lignosulphonate resulted in a further increase in growth of the pigs. The feed consumption was reduced and the percentage of meat remained unchanged. The same effect would occur when feeding the other animals covered by the claims because the beneficial effect was due to the control of the undesirable bacteria in the digestive tract of the animals and said bacteria were independent of the class of animal.

– The use of smaller quantities of formic acid led to a substantial reduction of the corrosion of the equipment used.

– The skilled person would not find any suggestion of the growth enhancing effect of the additive in D1 or D2, which both related to the use of the same additive compositions for a different purpose, namely the preservation of the feed during ensilation.

IX. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of Claims 1 to 8 filed as first auxiliary request (now the only request) with letter of 22 August 2006.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments (Article 123(2) EPC)*.

2.1 The amendments made to the claims are supported by the original disclosure:

2.1.1 Claim 1 results from a combination of the features of originally filed Claims 9 and 1, further limited to the specific organic and inorganic acids recited in original Claim 3 and to the use of the additives as growth enhancers (support, for instance, page 1, first paragraph).

2.1.2 The remaining Claims 2 to 8 find their support in the corresponding original Claims 2 to 8.

3. *Novelty (Article 54 EPC)*.

3.1 The Examining Division rejected the application because of lack of novelty of the subject-matter of the then pending claims which were directed to additives already known from D1. This subject-matter is no longer covered by the present claims.

3.2 None of the available documents discloses the use of an additive containing an organic or inorganic acid and a spent sulphite liquor from an acidic or neutral cellulose sulphite cooking (hereinafter referred to as lignosulphonate) in the manufacture of compound feed for enhancing the growth of animals.

Documents D1 and D2 disclose additives containing an organic acid and a lignosulphonate but for a different purpose. Thus, D1 discloses the use of the additive for the treatment of animal feed such as grass, grain or mash during anaerobic ensiling in order to improve palatability and reduce losses in nutritive material (see Claim 13) and D2 discloses its use to improve the preservation of the feeding stuff and reduce the degree of breakdown of the feeding stuff in the rumen of the animal (see Claim 13).

3.3 The subject-matter of the claims is thus novel (Article 54 EPC).

4. *Inventive step (Article 56 EPC).*

4.1 Closest prior art

4.1.1 According to the introductory section of the application, organic acids such as formic acid or acetic acid are habitually used as additives to compound feed for pigs and have an efficacious effect on their growth and health. The addition of acid inhibits the activity of and kills unfavourable and undesirable bacteria in the digestive tract of the pig, thus reducing the amount of consumed feed per kg of growth without affecting the quality of the meat (page 1, lines 7 to 33).

4.2 The problem and its solution.

4.2.1 The use of such acids, however, involves some drawbacks including the corrosion of equipment and the exposure of the personnel to dangerous vapours due to the evaporation of e.g. formic acid. Additionally, it would be advantageous to improve the growth enhancing effect.

4.2.2 The technical problem to be solved by the application can thus be formulated as to provide an alternative growth enhancer additive wherein the above mentioned drawbacks of the use of organic acid are reduced and further showing an improved growth enhancing effect.

4.2.3 This problem is solved by the claimed use of an additive containing, in addition to the organic or inorganic acid, a lignosulphonate.

4.2.4 The results of the examples credibly demonstrate that this problem has been solved. By adding a lignosulphonate to the formic acid the amount of acid can be lowered, evaporation is avoided and the corrosive action of the additive is reduced (see example 3).

Moreover, example 1 shows that the additive has a positive effect, beyond that of formic acid alone, on the growth of pigs. According to this example, pigs fed with a compound feed to which formic acid and lignosulphonate have been added have a growth per day of 901 grams (example 1c), which is both higher than that achieved with plain compound feed (841 g, example 1A) and compound feed to which formic acid alone has been added (888 g, example 1b). The quantity of meat is essentially the same in all cases.

4.3 Obviousness.

4.3.1 There is no hint to this solution in the available prior art. As pointed out above in paragraph 3.2, documents D1 and D2 already use the same additive but for the very different purpose of feed preservation. Since this purpose is totally unrelated to the now claimed purpose of growth enhancing, these documents cannot suggest the now claimed use.

4.3.2 In summary, the finding that an additive containing certain acids and a lignosulphonate could advantageously be used as a growth enhancer is not a teaching the skilled person would find in any of the available prior art documents.

4.4 Hence, the Board considers that, in the light of the cited prior art, it would not have been obvious to a person skilled in the art, to arrive at the claimed solution. The subject-matter of Claim 1 as well as that of the dependent claims therefore fulfils the requirements of Article 56 EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the Examining Division with the order to grant a patent on the basis of Claims 1 to 8 of the first auxiliary request filed with letter dated 22 August 2006 after any necessary consequential amendment of the description.

The Registrar: The Chairman:

G. Röhn P. Kitzmantel