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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

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30 December 2009

(54) Title: JATHROPHA CURCAS HYBRID NANDAN-2 FOR HIGH OIL CONTENT AND CONSTRUCTION OF MOLECULAR MARKERS SPECIFIC TO IT

(57) Abstract: A *Jatropha curcas* hybrid designated as Nandan-2, responsible for high seed yield is disclosed. The process of invention relates to a new and distinctive *Jatropha curcas* hybrid designated as Nandan-2 for high oil content and construction of molecular marker specific to hybrid Nandan-2.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IN 08/00472

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C12N 5/04 (2009.01)

USPC - 800/260; 800/264; 435/420

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): C12N 5/04 (2009.01)

USPC: 800/260; 800/264; 435/420

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Biomass and Bioenergy, Vol 31

Asian Journal of Plant Sciences, Vol 5

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (PGPB,USPT,EPAB,JPAB): jatropha, pollen, ovule, oil, seed weight, curcas, jatropha curcas, 100-seed weight, intraspecific hybrid, plant, asexual, protoplast, north carolina design; esp@cenet: jatropha curcas

Google Scholar: "north carolina design" F2 biparental plant jatropha curcas oil 100-seed weight

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/0218679 A1 (BERNUETZ) 28 September 2006 (28.09.2006), abstract; para [0069], [0075], [0078], [0079], [0082], [0099], [0134], [0154], Table 3.	1-11
Y	KAUSHIK et al., Genetic variability and divergence studies in seed traits and oil content of Jatropha (Jatropha curcas L.) accessions, Biomass and Bioenergy, March 2007, Vol 31, No 31, pages 497-502, especially pg 497, abstract; pg 498, left column, first paragraph; pg 498, Table 1.	1-11
Y	MANICKAVELU et al., Genetic Analysis of Biparental Progenies in Rice (Oryza sativa L.), Asian Journal of Plant Sciences, Vol 5, No. 1, 2006, pages 33-36, especially 33, abstract; pg 33, right column, third paragraph; pg 34, left column, first paragraph.	1-11
Y	EP 1 817 956 A2 (MURALI et al.) 15 August 2007 (15.08.2007), para [0002], [0008].	7

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

15 September 2009 (15.09.2009)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IN 08/00472

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 12-29
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.