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(54) Title: SYSTEM AND METHOD FOR DETERMINING ANIMAL BEHAVIORAL PHENOTYPES

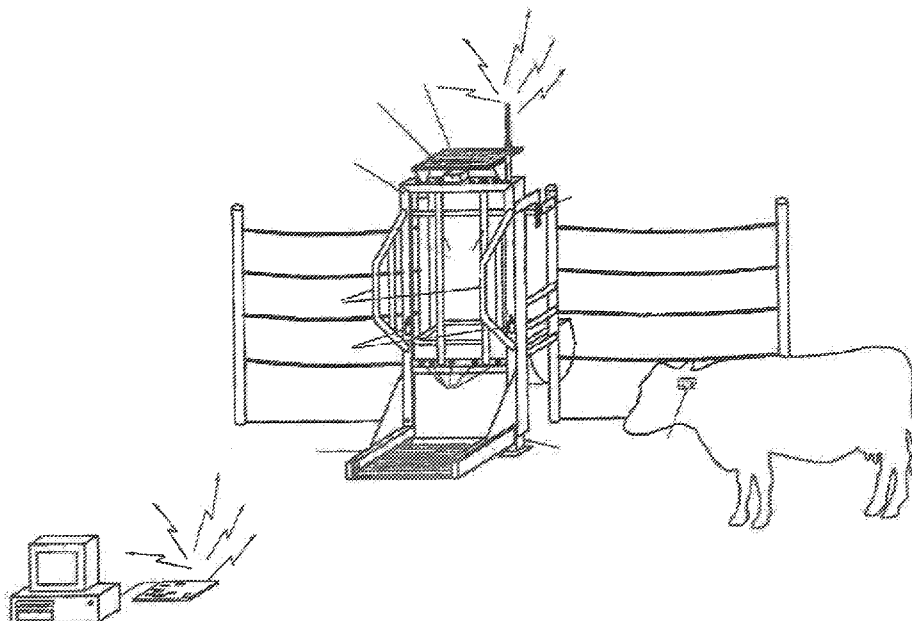


Fig. 1

(57) Abstract: A highly automated system and method for predicting, identifying and quantifying unique phenotypes of an animal that are beneficial for enhancing the performance, well-being and profitability of animals in a given production environment based on analysis of data from high frequency weight measurements of a feed.



Published:

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- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2019/000247

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC: <i>A01K 67/00</i> (2006.01), <i>A01K 13/00</i> (2006.01), <i>G06Q 10/04</i> (2012.01), <i>G06Q 50/02</i> (2012.01), <i>G16B 20/00</i> (2019.01)</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>														
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC: <i>A01K 67/00</i> (2006.01), <i>A01K 13/00</i> (2006.01), <i>G06Q 10/04</i> (2012.01), <i>G06Q 50/02</i> (2012.01), <i>G16B 20/00</i> (2019.01)</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Databases: Google Patent, Agricola, Google Scholar Key words: livestock, breeding, feed, weight, sensor, RFID, monitor*, phenotype, select*</p>														
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>US6868804B1 (HUISMA et al.) 22 March 2005 (22-03-2005) *see whole document*</td> <td>1 – 9</td> </tr> <tr> <td>Y</td> <td>US3929277A (BYRNE et al.) 30 December 1975 (30-12-1975) *see whole document*</td> <td>1 – 9</td> </tr> <tr> <td>Y</td> <td>US7399220B2 (KRIESEL et al.) 15 July 2009 (15-07-2008) *see whole document*</td> <td>1 - 9</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	US6868804B1 (HUISMA et al.) 22 March 2005 (22-03-2005) *see whole document*	1 – 9	Y	US3929277A (BYRNE et al.) 30 December 1975 (30-12-1975) *see whole document*	1 – 9	Y	US7399220B2 (KRIESEL et al.) 15 July 2009 (15-07-2008) *see whole document*	1 - 9
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<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.														
<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“D” document cited by the applicant in the international application</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p>	<p>“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</p> <p>“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</p> <p>“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</p> <p>“&” document member of the same patent family</p>													
Date of the actual completion of the international search		Date of mailing of the international search report 23 December 2019 (23-12-2019)												
Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 819-953-2476		Authorized officer Steven Kolodziejczyk (819) 639-7689												

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2019/000247**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of the 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. Claim Nos.: 1 - 8
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 1 - 8 are directed to a scheme, rule or a method of doing business, which the International Searching Authority is not required to search under PCT Rule 39.1(iii).
Claim 9 is directed to essentially biological processes for the production of plants or animals, which the International Searching Authority is not required to search under PCT Rule 39.1(ii) PCT.
2. Claim 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. Claim Nos.:
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 claim 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 claim 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.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2019/000247

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US6868804B1	22 March 2005 (22-03-2005)	AU2004290474A1	02 June 2005 (02-06-2005)
		AU2004290474B2	12 May 2011 (12-05-2011)
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		US2005136819A1	23 June 2005 (23-06-2005)
		US7214128B2	08 May 2007 (08-05-2007)