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SUPERINDUSTRIA Y COMERCIO

Radicacion : 00051021 00000003

Folios: 2

Fecha (AMD): 2002-10-16 10:39:50

Trasite : 002 PATENTES D 1 REGISTRO/ 538 PETICION

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

SEÑORES

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES

REF: SOLICITUD No. : **00051021**

SOLICITANTE : **DISTRIBUTORS PROCESSING, INC.**

FECHA SOLICITUD : JULIO 7, 2000

PATENTE : SAPOGENINAS ESTEROIDES PARA EL CONTROL DE
COCCIDIOSIS EN ANIMALES

SOLICITUD DE ESTUDIO DE FONDO

DILIA RODRÍGUEZ D´ALEMAN, en mi condición de apoderada de la Sociedad solicitante, por el presente escrito atentamente solicito a Usted que habiéndose surtido la publicación de la presente solicitud, en la Gaceta de la Propiedad Industrial N°.519 de fecha Agosto 29 de 2002 se proceda con el estudio de Fondo.

Para tal fin me permito anexar la tasa correspondiente. Recibo No.

Agradezco continuar con el presente trámite.

Señor Jefe,

DILIA RODRIGUEZ D´ALEMAN

C.C. 41.654.882 de Bogotá

T.P. 20824 del C.S.J.

P-333

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Industria y Comercio
SUPERINTENDENCIA

NIT : 800176089-2

SUPERINDUSTRIA Y COMERCIO
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Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

RECIBO OFICIAL DE CAJA : 02 - 61,869
FECHA : SEPTIEMBRE 16 DE 2002

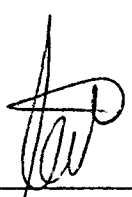
***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
CLARKE MODET Y CO. COLOMB	CONSIGNACION	BANCO POPULAR	050-00110-6	4801691	16/09/2002	2,089,800.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01	SOLICITUDES	
		B5 EXAMEN DE PATENTABILIDAD DE INVEN	318,000.00
		TOTAL :	318,000.00

BON: TRESCIENTOS DIEZ Y OCHO MIL PESOS



RESPONSABLE : _____

FECHA DE CAJA APLICADO AL EXPEDIENTE No. _____

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5/50

2005-06-09
375

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES

2020

Bogotá, D.C., 02 de junio de 2005

Apoderado: Dilia Rodríguez D' Aleman

Oficio: 11928

REFERENCIA: Radicación No. 0-51021
Tramite 002
Evento 001
Actuación 430
Folios

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

Documentos estudiados:

- ◆Capítulo descriptivo folios 4 a 13;
- ◆Capítulo reivindicatorio modificado, folio 34;
- ◆1° examen de forma folios 28 y 29;
- ◆Respuesta técnica al primer examen de forma, folio 33;
- ◆Solicitud de la cual se reivindica prioridad, folios 16 a 23 y 36 a 43;
- ◆2° examen de forma, folio 44;
- ◆Solicitud del examen de patentabilidad, folios 49 y 50;

Objeto de la invención:

La presente solicitud cuyo título es "SAPOGENINAS ESTEROIDALES PARA EL CONTROL DE COCCIDIOSIS EN ANIMALES"

El objeto de la solicitud es el uso de sapogeninas esteroideas en el alimento o agua de animales para el tratamiento de la coccidiosis.

El objeto de la invención se puede clasificar según la clasificación internacional como A61K 35/78.

P-322

Determinación del estado de la técnica:

El artículo 16 de la Decisión 486 de la Comisión establece: *"El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida.*

Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."

Se realizo la búsqueda del estado de la técnica con fecha anterior a la fecha de presentación de la primera solictud, de la cual se reivindica prioridad, 07 de septiembre de 1999. Consultada la fuente de información con que cuenta este despacho se encontró los siguientes documentos:

No.	Documento No.	Título	Fecha de publicación
D1	GB 893,417	Grown stimulating animal feed composition	28-jul-1982

Evaluación de los requisitos de patentabilidad:

El artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece: *"Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento, en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial."*

En cumplimiento con este artículo, se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicación industrial con el fin de establecer la patentabilidad de la invención reivindicada en la solicitud en estudio.

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Evaluación de la Novedad:

El art.16 de la Decisión 486 de la Comisión de la Comunidad Andina establece:
"Una invención se considerará nueva cuando no está comprendida en el estado de la técnica." "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida.

Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."

-La solicitud en estudio reclama las composiciones que contengan una una más sapogeninas esteroidales, como ingrediente activo.

-La anterioridad D1 enseña que las sapogeninas compuestos son muy conocidos de ocurrencia natural, tambien enseña composiciones que comprenden sapogeninas como principio activo. Lo que demuestra que las composiciones dende el principio activo es una o mas sapogeninas no es nuevo. Ya que lo que se pretende patentar es un nuevo uso de las sapogeninas.

En conclusión los requisitos de Patentabilidad de la presente solicitud **están** afectadas así:

No.	Documento	Reivindicaciones	Requisito que afecta
D1.	GB 893,417	1 a 5	Novedad

En cumplimiento del artículo 45 de la decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta días contados a partir de la fecha de la notificación de la presente

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sesenta días contados a partir de la fecha de la notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo 5° del título 1° de la Circular Única n°. 10 de 2001.

ALIX CARMENZA CÉSPEDES DE VERGEL.

Jefe de la División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista de fecha 09 JUN. 2003

CONCEPTO TÉCNICO No. 809	EXAMINADOR TÉCNICO Código: 202012
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PATENT SPECIFICATION

NO DRAWINGS

893,417



Date of Application and filing Complete Specification :
January 8, 1960.

No. 754/60.

Application made in United States of America on
January 8, 1959.

Complete Specification Published April 11, 1962.

Index at Acceptance: Class 5(2), J3(B:C:F1:F2:G3:G5).

International Classification: A23k.

Growth stimulating animal feed composition.

COMPLETE SPECIFICATION

We, CHAS. PFIZER & CO., INC., a corporation organized under the laws of the State of Delaware, United States of America, of 11 Bartlett Street, Brooklyn, State of New York, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to animal feed compositions useful for stimulating the growth of animals.

It more particularly is concerned with the fortification and improvement of standard nutritionally-balanced feeds by the addition thereto of dietary substances and mixtures of dietary substances. The dietary substances of this invention are sapogenins and mixtures of sapogenins with compounds possessing estrogenic activity, viz. estrogenic substances.

The sapogenins is a well known group of substances which occur naturally in the form of glycosides, commonly known as saponins. Exemplary of the sapogenins are diosgenin, sarsasapogenin, episarsasapogenin, tigogenin, smilagenin, neatisapogenin, nitogenin, gitagenin, chlorogenin, lilligenin and digitogenin.

An estrogenic substance is any chemical substance which, when administered in sufficient amounts, initiates estrus in sexually mature normal female animals. This includes both natural and synthetic substances, but principally the latter which are commercially available. Exemplary of these substances are diethylstilbestrol, estrone, estradiol, genistin, derivatives of diethylstilbestrol, dianisylhexene, dienestrol, hexestrol and the like.

It has now been found that sapogenins may be added to the diet of various animals to produce highly desirable results. Thus, when an animal is fed on a standard, or

conventional, nutritionally-balanced feed composition together with at least one sapogenin, it is found that the animal's growth is improved and/or its feed efficiency improved. Additionally, there is a general improvement in the quality of the meat which is produced by the animals treated in this manner. This is true of ruminant animals, such as sheep and cattle, as well as non-ruminant animals, in particular, swine. Although individual animals may vary to some extent in their response to the present feeds, on the average the group of animals will show a definite improvement as indicated above. Of course, the present invention contemplates the use of only non-toxic sapogenins.

It has also been found the concurrent administration of an estrogenic substance together with a sapogenin results in even a greater growth response than could be anticipated from the use of the sapogenin and of the estrogenic substance when used alone. This favorable effect results in increased rate of weight gain and improved feed efficiency, as well as an increase in the quality of meat that is produced. Other beneficial results are also obtained.

Any animal feed composition may be prepared to comprise the usual nutritionally-balanced carbohydrates, proteins, minerals and vitamins together with at least one sapogenin as described above. Particularly valuable is smilagenin which is preferred. When a feed containing a major proportion of nutritious substance and a minor proportion of a sapogenin, particularly together with a minor proportion of an estrogenic substance, is employed, the animals grow faster than usual with a remarkably greater feed efficiency. This simply means that the animals attain a given weight in a shorter period of time with the consumption of smaller quantities of feed than is possible with feeds not con-

(Price 4s. 6d.)

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taining the valuable, growth-promoting additives of this invention.

Valuable growth stimulation may be achieved by administration of a sapogenin, preferably smilagenin, by the oral route in the form of tablets, capsules, solutions, or suspensions admixed with one or more of the components of the animal's feed.

The amount of sapogenin which may be administered to the animals will vary somewhat with the species of animal and the method of administration. The feed desirably contains from about 0.1 gram to about 10 grams per ton. As used herein the word "ton" denotes the short ton of 2000 lbs. The proportion in a feed will vary with the amount that is desirable to administer to the selected animal and the animal's feed. Although the response to these materials will vary somewhat with the particular species of animal, this can be readily determined and alteration of the proportions indicated above made with ease.

A standard feed composition to which the materials described above may be added varies somewhat depending upon the animal for which the product is to be used, the economics of feedstuff materials, the stage of growth of the animal and other factors. In general, a source of carbohydrate, some protein, minerals and vitamins as mentioned above are highly desirable. Various sources of carbohydrate may be used for this purpose. Ground grain and grain by-products are particularly useful for this purpose, but various other materials are also of value, such as molasses and other sugar by-products. Grains may be used to supply protein for feeds, and this may be supplemented, if desired, by the addition of various animal by-products, such as fish meal, meat-scrap and the like. Vegetable protein material, such as soybean oil meal, peanut meal, cottonseed meal and the like, is also of use. Vitamins, such as A, B, riboflavin, vitamin B complex and others of this nature are also effective. Sources of minerals, such as bone meal, limestone and mineral supplements also have a desirable function in the complete feeds. Various government publications particularly those of the United States National Research Council give recommended nutrient levels for various types of animals. Other publi-

cations are also available giving this type of information. In general, the compositions of the present invention work best when the animal is receiving a reasonably nutritious diet.

When animals are treated with the compositions of the present invention, there results an increase in the rate at which they gain weight, particularly in the early rapid-growth stages of their lives. For instance, the animals are found to gain weight at an early stage of their growth at a rate of from about 6% to about 17% or more greater than normal. This increase in growth rate has generally been achieved with sapogenins and even greater effects have been achieved with the combination of sapogenin with an estrogenic substance. The combination of smilagenin and diethylstilbestrol gives particularly valuable response, for example, unusually effective growth promotion, improved feed efficiency and unexpected increase in the quality of meat thus produced.

The present feed compositions may also contain additional agents, whether for the promotion of growth or the general well being of the animal. Such agents include tetracycline antibiotics, such as oxytetracycline and tetracycline as well as piperazine derivatives such as N-p-chlorobenzhydryl-N-hydroxyethoxyethyl piperazine.

The following examples are given by way of illustration.

EXAMPLE I

Lambs were fed on a nutritious diet of the following ingredients:

	Parts
dehydrated alfalfa meal	3.5
ground yellow corn	5.0
urea	1.0
bone meal	1.0
cane molasses	10.0
bentonite	3.0

Groups of lambs were fed this diet together with smilagenin at levels of 2.0 g. an 8.0 g./ton of ration. Another group was fed on this diet with no smilagenin added and served as a control group. In the following table the results after 75 days are summarized.

TABLE 1

	Treatment	No. of lambs	Av. daily gain (lb.)	Carcass grade (a)	Feed per lb. gain (lb.)	Growth Index (b)
110	Control	12	0.322	8.58	9.80	100
	Control	11	0.335	8.64	9.49	
	Smilagenin 2 g/ton	10	0.365	9.20	8.41	111
	Smilagenin 8 g/ton	11	0.379	9.27	8.17	116

- (a) Carcass grade; medium good, 8; high good 9; low choice, 10. (b) Growth Index is the percentage increase in growth added to 100. It is obvious that the animals treated with smilagenin gave a greater weight gain, a greater feed efficiency and improved carcass grade over untreated animals.

EXAMPLE II

- Pigs were fed on a 14% protein ration containing meat, bone scraps and alfalfa meal in addition to mineral and vitamin supplements. One group was fed on the ration, while other groups were fed with this ration containing smilagenin at levels of 0.1 g/ton, 1 g/ton and 10 g/ton of ration.

In the following table are given the results after the animals had been raised to approximately 165 lbs.

TABLE 2

Treat- ment	No. of pigs	Av. daily gain (lb.)	Feed per lb. gain (lb.)	Growth Index
Control	9	1.40	3.39	100
Smilagenin 0.1 g/ton	9	1.54	3.24	110
Smilagenin 1 g/ton	9	1.46	3.14	104
Smilagenin 10 g/ton	9	1.43	3.23	102

EXAMPLE III

- Baby pigs were fed a nutritious diet containing 50 g/ton of oxytetracycline. Two groups of pigs were fed this same diet containing smilagenin at levels of 0.1 and 1 g/ton respectively. The results obtained are summarized in the following table.

TABLE 3

Treat- ment	No. of pigs	Av. daily gain (lb.)	Growth Index	Feed/ Gain
Control	18	0.56	100	1.99
Smilagenin 0.1 g/ton	18	0.61	109	1.84
Smilagenin 1.0 g/ton	18	0.60	107	1.84

- Other baby pigs were similarly fed a nutritious diet, without oxytetracycline. Two groups of pigs were fed this same diet with smilagenin at levels of 0.01 g. and 0.5 g. per ton of feed. The results are summarized in the following table.

TABLE 4

Treat- ment	No. of pigs	Av. daily gain (lb.)	Growth Index	Feed/ Gain
Control	24	0.46	100	1.96
Smilagenin 0.01 g/ton	24	0.51	111	1.89
Smilagenin 0.5 g/ton	24	0.54	117	1.78

EXAMPLE IV

- Lambs were fed a nutritious diet as described in Example I. One group was fed this diet containing diethylstilbestrol at a level of 1.25 g/ton of feed. A second group was fed this diet containing the same amount of diethylstilbestrol and smilagenin at a level of 8 g/ton of feed. A third group was fed the untreated diet and served as control. The following table summarizes the results obtained which are based on 56 days of treatment.

TABLE 5

Treat- ment	No. lambs	Av. daily gain (lb.)	% in- crease	Feed/ Gain
Control	24	0.368	—	6.84
Smilagenin 8.0 g/ton	12	0.390	6%	6.23
Diethylstilbestrol, 1.25 g/ton (control)	12	0.432	17.4%	6.13
Diethylstilbestrol, 1.25 g/ton and 8.0 g/ton smilagenin	12	0.534	45%	5.25

- It is obvious from these results that the combination of diethylstilbestrol and smilagenin gives outstanding increase in daily weight gains and a higher efficiency in the conversion of feed to body weight as evidenced by the Feed/Gain ratio.

Similar results are obtained when employing other estrogenic substances in place of diethylstilbestrol.

WHAT WE CLAIM IS:

1. A growth stimulating animal feed composition comprising nutritive animal feed and at least one non-toxic sapogenin, preferably together with an estrogenic substance.
2. A composition according to claim 1, wherein the sapogenin is smilagenin.
3. A composition according to claim 1 or 2 wherein the estrogenic substance is diethylstilbestrol.
4. A composition according to any one of the preceding claims wherein said sapogenin is present in the composition in the amount of about 0.1 gram to about 10 grams per ton of feed.
5. A composition according to any one of the preceding claims wherein said animal feed comprises nutritionally-balanced quantities of carbohydrate, protein, vitamins and minerals.
6. A growth stimulating animal feed composition substantially as hereinbefore described with reference to the Examples.
7. A process for preparing a growth stimulating animal feed composition comprising mixing nutritive animal feed with at least one non-toxic sapogenin, preferably

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together with an estrogenic substance.

8. A process according to claim 7 wherein the sapogenin is smilagenin.

9. A process according to claim 7 or 8
5 wherein the estrogenic substance is diethylstilbestrol.

10. A process according to any one of
claims 7 to 9 wherein about 0.1 gram to
about 10 grams of sapogenin is mixed with
10 about one ton of feed, preferably comprising
nutritionally-balanced quantities of carbo-
hydrate, protein, vitamins and minerals.

11. A process for preparing a growth
stimulating animal feed composition substan-
tially as hereinbefore described with refer- 15
ence to the Examples.

STEVENS, LANGNER, PARRY &
ROLLINSON,
Chartered Patent Agents,

Agents for the Applicants.