08/14/2014 502934699

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2981297

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| APRIL L. LEONARD | 08/12/2014 |
| TIM FOX | 03/14/2013 |
| BAILIN LI | 08/12/2014 |
| BRIAN R. LOVELAND | 03/14/2013 |
| MARY TRIMNELL | 03/15/2013 |
| MARC C. ALBERTSEN | 03/18/2013 |

RECEIVING PARTY DATA

| Name: | PIONEER HI-BRED INTERNATIONAL, INC |
|-----------------|------------------------------------|
| Street Address: | 7100 NW 62ND AVE. |
| City: | JOHNSTON |
| State/Country: | IOWA |
| Postal Code: | 50131-1014 |
| Name: | E.I. DUPONT DE NEMOURS & COMPANY |
| Street Address: | 1007 MARKET STREET |
| City: | WILMINGTON |
| | |
| State/Country: | DELAWARE |

PROPERTY NUMBERS Total: 2

| Property Type | Number |
|---------------------|-----------|
| Application Number: | 61610232 |
| PCT Number: | US1330406 |

CORRESPONDENCE DATA

Fax Number: (515)535-6883

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 515-535-6297

Email: cindy.doty@pioneer.com **Correspondent Name:** KAREN K VARLEY Address Line 1: 7100 NW 62ND AVE. Address Line 4: JOHNSTON, IOWA 50131

PATENT -

REEL: 033533 FRAME: 0484 502934699

| ATTORNEY DOCKET NUMBER: | 4168 |
|---------------------------------------|------------------|
| NAME OF SUBMITTER: | KAREN K VARLEY |
| SIGNATURE: | /Karen K Varley/ |
| DATE SIGNED: | 08/14/2014 |
| Total Attachments: 12 | |
| source=2014_08_14_08_59_15#page1.tif | |
| source=2014_08_14_08_59_15#page2.tif | |
| source=2014_08_14_08_59_15#page3.tif | |
| source=2014_08_14_08_59_15#page4.tif | |
| source=2014_08_14_08_59_15#page5.tif | |
| source=2014_08_14_08_59_15#page6.tif | |
| source=2014_08_14_08_59_15#page7.tif | |
| source=2014_08_14_08_59_15#page8.tif | |
| source=2014_08_14_08_59_15#page9. | tif |
| source=2014_08_14_08_59_15#page10.tif | |
| source=2014_08_14_08_59_15#page11.tif | |

source=2014_08_14_08_59_15#page12.tif

WORLDWIDE ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in fulfillment of a pre-existing obligation of assignment, we, Marc Albertsen; Tim Fox; Brian Loveland; and Mary Trimnell of PIONEER HI-BRED INTERNATIONAL, INC., the undersigned inventors have sold and assigned, and by these presents hereby sells and assigns, as indicated below, unto

PIONEER HI-BRED INTERNATIONAL, INC. 7100 NW 62nd Avenue P.O. Box 1014 Johnston, Iowa 50131-1014

AND, April L. Leonard and Bailin Li of E. I. DUPONT DE NEMOURS & COMPANY, the undersigned inventor(s) have sold and assigned, and by these presents hereby sells and assigns, as indicated below, unto

E. I. DUPONT DE NEMOURS & COMPANY 1007 Market Street Wilmington, Delaware 19898

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the inventions in "GENETIC REDUCTION OF MALE FERTILITY IN PLANTS", including all improvements to said invention ("Invention")

| | executed concurrently herewith |
|-------------|--|
| | executed on |
| | US Serial No. filed and; |
| \boxtimes | PCT Serial No. PCT/US2013/30406 filed March 12, 2013, |
| which | claim(s) priority to U.S. Serial No. 61/610,232 , filed on March 13, 2012. |

as set forth in this United States Patent Application and in the PCT Patent Application

including all provisional, non-provisional, divisional, renewal, substitute, continuation, continuations-in-part, international and Convention applications based in whole or in part upon said Inventions or upon said Applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said Inventions or upon said Applications and every priority right that is or may be predicated upon or arise from said Inventions, said Applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said Inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in

accordance herewith; said assignment including the right to bring legal proceedings and obtain any relief to which the undersigned would have been entitled if this assignment had not been made, in respect of any infringements of the undersigned's rights in relation to said inventions, Applications and Letters Patent which occur before or after the date of this assignment; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said Inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said Inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be of said Inventions, and to testify in any proceedings relating to said Inventions, patent applications, Letters Patent, and to bind our heirs, legal representatives, and assigns, promptly to communicate to said Assignee or its representatives any facts known to us relating to said Inventions, to testify in any interference or legal proceedings involving said Inventions, to execute any additional papers which may be requested to confirm the right of the Assignee, its representatives, successors or assigns to secure patent or similar protection for said Inventions in all countries and to vest in the Assignee complete title to said Inventions and Letters Patent, without further compensation, but at the expense of said Assignee, its successors, assigns and other legal representatives.

The undersigned hereby grant an authorized representative of Assignee the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office or the Patent Office of any other country for recordation of this Assignment.

This assignment is deemed to be effective at least as early as of March 13, 2012.

2

| In Witness Whereof, I have, 2013. | executed this Worldwide Assignment on the 18th day of |
|---|---|
| Marc C Albertsen | Signature of Inventor) |
| State of <u>Towa</u> County of <u>Polk</u> | |
| who appeared before me and | have satisfactory evidence that Marc C Albertsen is the person said person acknowledged that he signed this instrument and and voluntary act for the uses and purposes mentioned in the |
| | Dated 18 Ward 2013 |
| ALICE A. PENDERGAST COMMISSION # 162206 MY COMMISSION EXPIRES | Signature of Notary Public Quice Quederquit Printed Name Alice A. Penderquit |
| | My appointment expires 12 Seatember 2015 |

Norch

made of the Design

Joura Polk

15 Marval 2013

Click a tendergast Alice A. Fendergast 125 eptember 2015

ld Sept 2015

| In Witness Whereof, I have | executed this Worldwide Assignment on the 14 day of |
|---|--|
| <u>Tim Fox</u> | Signature of Inventor) |
| State of $\frac{\mathcal{Lowa}}{Polk}$ |)) |
| appeared before me and said | have satisfactory evidence that Tim Fox is the person who is person acknowledged that he signed this instrument and and voluntary act for the uses and purposes mentioned in the |
| | Dated 14 Warch 2013 |
| ALICE A. PENDERGAST COMMISSION # 182206 MY COMMISSION EXPIRES AND ADDRESS AND | Signature of Notary Public Olice Leading ast Printed Name Alice A. Pendergast |
| | My appointment expires 1259 (entre 2015 |

• • •

| In Witness Whereof, I have executed August, 2013. 2014 Q.J. | this Worldwide Assignment on the 13th day of |
|---|--|
| April L. Leonard | Signature of Inventor) |
| State of Delaware County of New Castle | |
| I certify that I know or have satisfac | ctory evidence that April L. Leonard is the person who |

appeared before me and said person acknowledged that she signed this instrument and

instrument.

acknowledged it to be her free and voluntary act for the uses and purposes mentioned in the

Signature of Notary Public

My appointment expires Nov. 30

CAROL A. PURSE NOTARY PUBLIC STATE OF DELAWARE My commission expires Nov. 30, 2014

| In Witness Whereof, I have executed | this Worldwide Assignment on the | 13^{+h} day of |
|---|----------------------------------|------------------|
| <u>Bailin Li</u> | Signature of Inventor) | |
| State of <u>Delaure</u>) County of <u>New Castle</u>) | | |

I certify that I know or have satisfactory evidence that Bailin Li is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Signature of Notary Public Carol A. Purse

Printed Name Carol A. Purse

My appointment expires Nov 30, 2014

CAROL A. PURSE NOTARY PUBLIC STATE OF DELAWARE My commission expires Nov. 30, 2014

| In Witness Whereof, I have, 2013. | executed this Worldwide Assignment on the 1th day of | |
|---|--|--|
| Brian R. Loveland | Signature of Inventor) | |
| State of <u>Lowa</u> | | |
| County of Polk | | |
| I certify that I know or have satisfactory evidence that Brian R. Loveland is the person who appeared before me and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument. | | |
| | Dated 14 March 2013 | |
| AUCE A. PENDERGAST COMMISSION # 162206 MY COMMISSION EXPIRES 1048 12 5015 | Signature of Alice A. Pendergas Printed Name Alice A. Pendergas | |
| | My appointment expires 12 September 2015 | |

walled sort

aast. Alk

14 March 2015

Clice W. Pendergast Allice A. Pendergast 12 September 2025'

id Sapit sopie

| In Witness Whereof, I have e | executed this Worldwide Assignment on the 🖊 day of |
|--|---|
| Mary Trimnell | May June O Signature of Inventor) |
| State of <u>Lowa</u> County of <u>RK</u> | |
| appeared before me and said acknowledged it to be her free a instrument. | ive satisfactory evidence that Mary Trimnell is the person who person acknowledged that she signed this instrument and and voluntary act for the uses and purposes mentioned in the |
| | Dated 15 March 2013 |
| | Signature of Alice a Lendergas To Alice A Padarate |
| | Printed Name Hice H. Texdengast My appointment expires 12 September 2015 |

15

Mouselle.

Nay Junus C

I owa Jolk

15 March 2013
Celies Citeratury ast
Hice H. Ferdengast
12 September 2015

PATENT REEL: 033533 FRAME: 0497

RECORDED: 08/14/2014