



101110780

NAME AND ADDRESS OF RECEIVING PARTY(IES):

Pioneer Hi-Bred International, Inc.  
800 Capital Square, 400 Locust Street  
Des Moines, Iowa 50309

To the Honorable Commissioner of Patents and Trademarks:  
Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Mitchell C. Tarczynski  
Marianne M. Laporte  
Bo Shen

*MSD  
8/2/99*

Additional name(s) of conveying party(ies) attached? Yes  No

3. Nature of conveyance:

- Assignment
- Merger
- Security Agreement
- Change of Name
- Other \_\_\_\_\_

Execution Date: 7-16-99

Additional name(s) & address(es) attached? Yes  No

4. Application No. 09/321,991

Patent No. \_\_\_\_\_

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Additional numbers attached? Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

W. Murray Spruill  
**ALSTON & BIRD LLP**  
P. O. Drawer 34009  
Charlotte, NC 28234-4009

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41) \$40.00

- Enclosed
- Authorized to be charged to deposit account

8. Deposit account number: 16-0605

DO NOT USE THIS SPACE

9. Statement and signature

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

W. Murray Spruill, Reg. No. 32,943

Name of Person Signing

*WMSpruill*  
Signature

7-29-99  
Date

08/03/1999 DMSUYEN 00000226 09321991

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Total number of pages including cover sheet, attachments and document: 5

**ASSIGNMENT - WORLDWIDE**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

PIONEER HI-BRED INTERNATIONAL, INC.

800 Capital Square  
400 Locust Street  
Des Moines, Iowa 50309

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 invention in **"METHODS FOR MODULATING WATER-USE EFFICIENCY OR PRODUCTIVITY IN A PLANT"**

as set forth in this United States Patent Application

- executed concurrently herewith  
 executed on \_\_\_\_\_  
 Application No. 09/321,991; filed May 28, 1999

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation 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; 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.

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 for recordation of this Assignment.

16 July 1999  
Date

*Mitchell C. Tarczynski*  
Mitchell C. Tarczynski

State of Iowa)

County of Polk)

ss.

I certify that I know or have satisfactory evidence that **Mitchell C. Tarczynski** 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 7-16-99

Signature of Notary Public *Sharon Biller*

Printed Name SHARON BILLER

My appointment expires 7-19-01

7-16-99  
Date

Marianne M. Laporte  
Marianne M. Laporte

State of Iowa )

County of Polk )

ss.

I certify that I know or have satisfactory evidence that Marianne M. Laporte 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 7-16-99

Signature of Notary Public Sharon Biller

Printed Name Sharon Biller

My appointment expires 7-19-01

7/16/99

Date

*Bo Shen*

Bo Shen

State of Iowa )

County of Polk )

ss.

I certify that I know or have satisfactory evidence that Bo Shen 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 7-16-99

Signature of Notary Public *Sharon Billew*

Printed Name SHARON Billew

My appointment expires 7-19-01

Attorney Docket No. 5718-91

RTA01/2065058v1