PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SRINIVAS PHANI KUMAR CHAVALI	06/28/2017
SAMBARTA DASGUPTA	06/28/2017
NALINI POLAVARAPU	06/28/2017

RECEIVING PARTY DATA

Name:	MONSANTO TECHNOLOGY LLC
Street Address:	800 NORTH LINDBERGH BOULEVARD
City:	ST. LOUIS
State/Country:	MISSOURI
Postal Code:	63167

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16448334

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 5089-000082-US-COB

NAME OF SUBMITTER: BRIAN G. PANKA

SIGNATURE: /BRIAN G. PANKA/

DATE SIGNED: 06/25/2019

Total Attachments: 4

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PATENT 505541946 REEL: 049575 FRAME: 0590

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PATENT REEL: 049575 FRAME: 0591

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

METHODS FOR IDENTIFYING CROSSES FOR USE IN PLANT BREEDING

for which Ass	signor is a	bout to make or has made United States or International application for patent
(a)		executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration);
(b)		executed on,; or
(c)	\boxtimes	filed on <u>June 8, 2017</u> , and assigned Serial No. <u>15/618,023</u> ; and

WHEREAS, Monsanto Technology LLC, Mail Zone E1NA, 800 North Lindbergh Blvd., St. Louis, MO 63167, hereinafter referred to as Assignee, is desirous of acquiring all right, title, and interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon. including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights.

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, any derivation proceedings relating thereto, and as to Letters Patent any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and for litigation regarding, or for the purpose of defending the validity of or protecting title to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee and its successors in interest without further or other compensation than that above set forth.

Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment. Assignor further covenants not to challenge, or assist or participate in any third party challenge to, the assigned inventions, or any patent application or patent thereon, whether by litigation, post grant review, inter partes review, covered business method review, reexamination, or otherwise.

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of Harness, Dickey & Pierce, P.L.C. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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METHODS FOR IDENTIFYING CROSSES FOR USE IN PLANT BREEDING

Nalini Polavarapu	apa	
State of Missouri County of St. Louis)) ss.)	
On this day of, 20_17, before me personally appeared the foregoing individual, who executed the foregoing instrument and who acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.		
My Commission Expirement May 2, 2018 SEAL S. Charles County Commission #149685	Acting in the County Of St Chaules	
	State Of Missouli My Commission Expires	
	May 2, 2018	

METHODS FOR IDENTIFYING CROSSES FOR USE IN PLANT BREEDING

Chophan	
Srinivas Phani Kumar Chavali	
State of Missouri) ss. County of St Locis) ss.	
appeared the foregoing individual, who	, 20 \(\frac{1}{2} \), before me personally executed the foregoing instrument and who the same of his/her own free will for the purposes
BONNYE C. HARTBECK My Commission Expires May 2, 2018 SEAL St. Charles County Commission #14968577	Notary Public, Borrye C. Hartbeck Acting in the County Of St. Charles
	State Of Missouri
	My Commission Expires May 2, 2018

METHODS FOR IDENTIFYING CROSSES FOR USE IN PLANT BREEDING

Sembarta Daegneta	
Sambarta Dasgupta	
State of Missouri) ss. County of St Louis)	
appeared the foregoing individual, who	executed the foregoing instrument and who the same of his/her own free will for the purposes
BONNYE C. HARTBECK My Commission Expires May 2, 2018 SEAL SEAL SEAL SEAL ST. Charles County Commission #14968577	Notary Public, Borrye C. Hartberk Acting in the County Of St Louis
	State Of Missouri
	My Commission Expires May 2,2018