No. 201100429

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Syngenta Crop Protection AG

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

An application requesting a certificate of protection for an alleged distinct variety of sexually reproduced, or tuber propagated plant, the name and description of which are contained in the application and exhibits, a copy of which is hereunto annexed and made a part hereof, and the various requirements of LAW in such cases made and provided have been complied with, and the title thereto is, from the records of the PLANT VARIETY PROTECTION OFFICE, in the applicant(s) indicated in the said copy, and Whereas, upon due examination made, the said applicant(s) is (are) adjudged to be entitled to a certificate of plant variety protection under the LAW.

Now, therefore, this certificate of plant variety protection is to grant unto the said applicant(s) and the successors, heirs or assigns of the said applicant(s) for the term of TWENTY years from the date of this grant, subject to the payment of the required fees and periodic replenishment of viable basic seed of the variety in a public repository as provided by LAW, the right to exclude others from selling the variety, or offering it for sale, or reproducing it, or importing it, or exporting it, or conditioning it for propagation, or stocking it for any of the above purposes, or using it in producing a hybrid or different variety therefrom, to the extent provided by the PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN, FIELD

'NPID3216'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the* ***City of Washington, D.C.*** *this nineteenth day of December, in the year* ***two thousand and thirteen.***

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

03/21/2012 dbc

dbc 09/20/2013

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Syngenta Crop Protection ~~A G~~ AG

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME

3. VARIETY NAME
NPID3216

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Schwarzwaldelle 215 Basel Switzerland 4058

5. TELEPHONE *(include area code)*
+41 61 323 11 11

6. FAX *(include area code)*
+41 61 323 12 12

FOR OFFICIAL USE ONLY

PVPO NUMBER
PV# 201100429

FILING DATE
July 20, 2011

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Switzerland
~~DE~~

9. DATE OF INCORPORATION
~~09/24/1976~~ Dec. 3, 1996

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION *(First person listed will receive all papers)*

~~Dana Rewoldt~~ Leah Houg
Dwight Bostwick
Roxanne Mainz
Syngenta Seeds Inc.
2369 330th ST
Slater IA 50124

FEES RECEIVED
FILING AND EXAMINATION FEES:
$ 4382.00
DATE 7/20/2011
CERTIFICATION FEE:
$
DATE

11. TELEPHONE (Include area code)
515.685.5000

12. FAX (Include area code)
515.685.5072

13. E-MAIL
roxanne.mainz@syngenta.com
~~dana.rewoldt@syngenta.com~~

14. CROP KIND *(Common Name)*
Corn, field

16. FAMILY NAME *(Botanical)*
gramineae

15. GENUS AND SPECIES NAME OF CROP
Zea mays L.

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ■ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ■ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ■ Exhibit A. Origin and Breeding History of the Variety
b. ■ Exhibit B. Statement of Distinctness
c. ■ Exhibit C. Objective Description of Variety
d. ☐ Exhibit D. Additional Description of the Variety *(Optional)*
e. ■ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ■ Exhibit F. Declaration Regarding Deposit
g. ☐ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
h. ■ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
○ YES *(If "yes", answer items 21 and 22 below)*
◉ NO *(If "no", go to item 23)*
○ UNDECIDED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ■ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
■ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ■ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Dwight Bostwick			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Dwight Bostwick			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Head, NAFTA Corn Breeding Projects	7-19-11		

ST-470 (07-01-2009) designed by the Plant Variety Protection Office

7/20/2011

PV# 201100429

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for $4,382 ($518 filing fee and $3,864 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice).* **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of $768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

Plant Variety Protection Office
Telephone: (301) 504-5518 **FAX:** (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

SPECIFIC INSTRUCTIONS:

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

US 07-26-2010

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NA

7/20/2011

Syngenta.
NPID3216
Exhibit A

Origin and Breeding History of Corn Inbred Line NPID3216

The corn inbred line NPID3216 was developed from a cross of inbred lines NP2052 (PVP certificate 200100031 and US Patent 6,723,901) and NP2536 (PVP certificate 200600095 and US Patent 7,534,942) then backcrossed to inbred line NP2052 (PVP certificate 200100031 and US Patent 6,723,901).

After the initial cross in the winter of 2002, mass selection and pedigree selection were employed for the development of inbred line NPID3216.

The chronology of inbreeding is given below:

Winter 2002 Kekaha, Kauai, HI	Initial cross made to create F1 population
Summer 2003 Janesville, WI	F1 population backcrossed to produce B1
Winter 2003 Kekaha, Kauai, HI	B1 population self pollinated to produce B1F2 population
Summer 2004 Stanton, MN	B1F2 population self pollinated to produce B1F3 population
Winter 2004 Kekaha, Kauai, HI	B1F3 population self pollinated to produce B1F4 families
Summer 2006 Stanton, MN	B1F4 families self pollinated to produce B1F5 families
Winter 2006 Graneros, Chile	B1F5 families self pollinated to produce B1F6 families
Summer 2007 Stanton, MN	B1F6 families self pollinated to produce B1F7 families
Winter 2007 Kekaha, Kauai, HI	B1F7 families self pollinated to produce B1F8 lines
Summer 2008 Stanton, MN	B1F8 lines self pollinated to produce B1F9 lines
Summer 2009 Stanton, MN	Line self pollinated and ears bulked to produce Breeder's Seed for inbred line NPID3216.

Selection criteria used during the inbreeding process included synchronous male and female flowering, plant health, ear fill, pre-harvest intactness and resistance to various stalk rots. Plants within each generation were also closely evaluated for uniformity of anther and silk color and plant and ear height. Selection was also done for general and specific combining ability for yield in hybrid combinations across several inbreds.

From 2008 to the present, the inbred line has been observed in Stanton, MN, Slater, IA and other locations. No phenotypic or isozymic variants have been observed. NPID3216 has been a uniform and stable inbred for at least 5 generations.

Exhibit B
Syngenta
NPID3216

Statement of Distinctness

The corn inbred line NPID3216 is most similar to Elite Syngenta Inbred line NP2536, PVP certificate 200600095 and US Patent 7,534,942. Comparisons of the inbred lines were conducted at the Stanton, MN Syngenta Seeds, Inc station and at a location near River Falls, WI in 2010.

Inbred line NPID3216 differs from Elite Syngenta inbred line NP2536 at Loci PGD1, MDH2, MDH3 and ACP4. This is shown in Table 1 below.

Inbred line NPID3216 also differs from Elite Syngenta inbred line NP2536 in Length of Tassel (from the top leaf collar to the tassel tip). See Table 2 below.

Inbred line NPID3216 also differs in cob color (white) from Elite Syngenta inbred line NP2536 (Dark Reddish Orange-a version of Red). See Table 3 below. Table 3 shows NPID3216 has a white cob while NP2436 has dark reddish orange (a version of red) cob.

NPID3216 is a distinct and unique line.

Table 1. Isozyme Profile of Inbred Line NPID3216 and Syngenta elite inbred line NP2536.

LOCI	NPID3216	NP2536
Locus PGM1	9	9
Locus PGM2	4	4
Locus PGD1	2	3.8
Locus PGD2	5	5
Locus IDH1	4	4
Locus IDH2	6	6
Locus MDH1	6	6
Locus MDH2	3	6
Locus MDH3	16	18
Locus MDH4	12	12
Locus MDH5	12	12
Locus MDH6	Mmm	Mmm
Locus ACP1	2	2
Locus ACP4	2	4
Locus PHI1	4	4
Locus ADH1	4	4

Syngenta
NPID3216 cont.

Table 2. Summary of differences in Length of Tassel (from the top leaf collar to the tassel tip) between inbred lines NPID3216 and NP2536. T test done using two sample test at 95% confidence interval; using S-PLUS® 6.2 for Windows STANDARD EDITION.

Trait	Location/ Planting date	Inbred Line A	Inbred Line B	Count A	Count B	Mean A	Mean B	Mean diff.	Std Dev A	Std Dev B	P value	T test
Tassel length (cm)	Stanton, MN 5/17/2010	NPID3216	NP2536	20	25	44.0	33.1	10.9	2.8	3.0	0	12.630
Tassel length (cm)	River Falls, WI 5/4/2010	NPID3216	NP2536	15	15	46.4	37.2	9.2	2.9	1.7	0	8.424

Table 3. Cob Color differences between inbred lines NPID3216 and NP2536.

Trait	Inbred Line A	Inbred Line B	Location/ Planting date	Inbred A Munsell value	Inbred B Munsell value	verbal Cob color inbred Line A	verbal Cob color inbred Line B
Cob Color	NPID3216	NP2536	Stanton, MN 5/17/2010	N/9.25	10R4/8	white	Dark Reddish Orange
Cob Color	NPID3216	NP2536	River Falls, WI 5/4/2010	N/9.25	10R4/8	white	Dark Reddish Orange

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Corn (*Zea mays* L.)

NAME OF APPLICANT(S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Syngenta Crop Protection AG		NPID3216

ADDRESS (Street and No. or RD No., City, State, ZipCode, and Country)	FOR OFFICIAL USE ONLY
Schwarzwaldelle 215 Basel Switzerland 4058	PVPO NUMBER PV# 201100429

In the spaces on the left, enter the appropriate numbers that describe the characteristics of the application variety. On the right, enter the appropriate numbers that describe the characteristics of the most similar comparison variety. Right justify whole numbers by adding leading zeros if necessary. The variety that you choose for comparison should be the most similar one in terms of overall morphology, background, genetics, and maturity.

In general, for this form, measurements of quantitative traits should be taken in **one trial** on **15-25 randomly selected plants** to obtain averages and statistics that describe a typical field of the variety. Trials should be done preferably in one location, with replicates, in the region of best adaptability (where the variety will grow and perform to its best potential). Trials should include the application variety plus all comparison varieties.

At least one year of trials should be conducted within the United States of America. (Form technical content last updated Dec. 2008.)

The following historical STANDARD INBRED LINES are available from the North Central Regional Plant Introduction Station in Ames, Iowa. They have been well characterized and may be used as comparison varieties. If used, then use the most similar (in background and maturity) of these to make comparisons based on grow-out trial data.

Yellow Dent Families:		Yellow Dent (Unrelated):	Sweet Corn:
Family	Members	Co109, ND246	C13, Iowa5125, P39, 2132
B14	CM105, A632, B64, B68	Oh7, T232	
B37	B37, B76, H84	W117, W153R	Popcorn:
B73	N192, A679, B73, NC268	W182BN	SG1533, 4722, HP301, HP7211
C103	Mo17, Va102, Va35, A682		
Oh43	A619, MS71, H99, Va26	White Dent:	Pipecorn:
WF9	W64A, A554, A654, Pa91	CI66, H105, Ky228	Mo15W, Mo16W, Mo24W

Describe the Region of Best Adaptability, trial set-up, and the environmental conditions (including monthly temperatures and rainfall) during the trial (continue in Comment Section).

Region of best adaptability- North Central region. Randomized complete Block Trial design. Trial at Stanton, MN Syngenta Seeds, Inc location, summer 2010.

Monthly Temp ave. High, Monthly Temp ave. Low, Monthly ave. rainfall- May: 80.5F, 55.8 F, .15 in.; June: 75.9 F, 58.7 F, 0.17 in; July: 82.1 F, 58.8 F, 0.14 in.; August: 83.1 F, 64.4 F, 5.5 in.; Sept: 68.3 F, 44.5 F, 9.4 in.
This location was irrigated with approximately 1 in. one time in July and once in August.

Application Variety Data	Comparison Variety Data
1. TYPE: 0 5 1 = Flint 2= Flint-like 3 = Intermediate 4 = Dent-like 5 = Dent	Comparison Variety Name: NP2536 0 5 Type
2. MATURITY (In Region Best Adaptability; show Heat Unit Formula in Comments section):	
DAYS / HEAT UNITS	DAYS / HEAT UNITS
065 / 1266.5 From **planting** to 50% of plants in silk	064 / 1244.5 50% Silk
063 / 1223.0 From **planting** to 50% of plants in pollen	063 / 1223.0 50% Pollen

7/20/2011

Application Variety Data				Comparison Variety Data			
3. PLANT:		Standard Deviation	Sample Size	Mean		Standard Deviation	Sample Size
204.5	cm Plant Height (to tassel tip)	8.1	30	199.0	cm Plant Height	8.2	30
069.5	cm Ear Height (to base of top ear node)	9.9	30	057.5	cm Ear Height	5.4	30
014.3	cm Length of Top Ear Internode	0.7	30	016.8	cm Internode	1.0	25
5	Anthocyanin of Brace Roots (when brace roots are green with some red or purple anthocyanin in stripes or speckles, rate the shade of anthocyanin) 1 = Absent (Green) 3 = Weak (Pink) 5 = Medium (Light red; Light red/purple) 7 = Strong (Red; Red/purple) 9 = Very Strong (Dark red/purple)			3	Brace Root Anthocyanin		
4. LEAF:		Standard Deviation	Sample Size	Mean		Standard Deviation	Sample Size
008.9	cm Width of Ear Node Leaf	0.4	30	007.9	cm Leaf Width	0.6	30
078.3	cm Length of Ear Node Leaf	3.8	30	083.2	cm Leaf Length	3.5	30
5	Leaf Attitude from main stem to tip of leaf (see UPOV diagrams) 1= Erect 3=Horizontal 5= Drooping			5	Leaf Attitude		
3	Pubescence on margin/edge of leaf sheath (Rate on scale from 1 = none to 9 = like peach fuzz)			3	Pubescence on margin/edge of leaf sheath		
5. TASSEL:		Standard Deviation	Sample Size	Mean		Standard Deviation	Sample Size
08	Number of Primary Lateral Branches	1.1	30	05	No. Tassel Branches	1.1	25
44.0	cm Tassel Length (From top **node below flag leaf** to tassel tip)	2.8	20	33.1	cm Tassel Length	3.0	25
8.4	cm Tassel Peduncle Length (From top **node below flag leaf** to bottom tassel branch)	2.2	20	3.6	cm Peduncle Length	1.7	25
28.6	cm Tassel Central Spike Length (From top tassel branch to tassel tip)	2.2	20	23.8	cm Central Spike Len	2.1	25
5	Branch Attitude from Central Spike from main spike to tip of tassel branch (see UPOV diagrams): 1 = Erect 3= Horizontal 5= Drooping			1	Tassel Branch Attitude		
1 & 9 2.5GY8/6 & 5R4/4	Anther Color (2-3 days after being exposed to allow for sun reddening effects) 1= Green or Yellow (ex. Munsell Code 2.5GY 8/6 or 10Y 8.5/6) 3= Pink (ex. Munsell 2.5R 7/6 or 5R 5/6) 5= Red (ex. Munsell 2.5R 4/8) 7= Dark Red (ex. Munsell 10RP 4/8) 9= Purple (ex. Munsell 5RP 5/8)			3 5R5/2	Anther Color		
1 & 9 5GY5/6 & 5RP4/4	Glume Color (on the top 2/3 of the glume) 1= Green or Yellow (ex. Munsell Code 2.5GY 8/6 or 10Y 8.5/6) 3= Pink (ex. Munsell 2.5R 7/6 or 5R 5/6) 5= Red (ex. Munsell 2.5R 4/8) 7= Dark Red (ex. Munsell 10RP 4/8) 9= Purple (ex. Munsell 5RP 5/8)			1 & 9 5GY5/6 & 5RP4/4	Glume Color		
Absent	Bar Glume Anthocyanin Color (on the bottom 1/3 of glume; see UPOV Diagram; Note: the bar glume is listed as "present" if it is present and the ring is at least 50% closed) 1= Green or Yellow (ex. Munsell Code 2.5GY 8/6 or 10Y 8.5/6) 3= Pink (ex. Munsell 2.5R 7/6 or 5R 5/6) 5= Red (ex. Munsell 2.5R 4/8) 7= Dark Red (ex. Munsell 10RP 4/8) 9= Purple (ex. Munsell 5RP 5/8)			Absent	Bar Glume Anthocyanin Color		

PV# 201100429

Application Variety Data			Comparison Variety Data		
6a. EAR (Unhusked Data):	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
7.5 cm Husk Extension (at harvest)	0.8	30	8.6 cm Husk Extension	1.2	30
23.1 cm Husk Leaf Length	1.1	30	20.5 cm Husk Leaf Len	1.6	30
1 Silk Color (2-3 days after emergence to allow for sun reddening effects) 2.5GY8/6 1 = Green or Yellow (ex. Munsell Code 2.5GY 8/6 or 10Y 8.5/6) 3 = Pink (ex. Munsell 2.5R 7/6 or 5R 5/6) 5 = Red (ex. Munsell 2.5R 4/8) 7 = Dark Red (ex. Munsell 10RP 4/8) 9 = Purple (ex. Munsell 5RP 5/8)			1 Silk Color 2.5GY8/8		
6b. EAR (Husked Ear Data):	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
14.0 cm Ear Length	0.7	30	10.8 cm Ear Length	0.7	30
42.8 mm Ear Diameter at mid-point	1.4	30	39.5 mm Ear Diameter	1.6	30
107.8 gm Ear Weight	10.2	30	073.4 gm Ear Wt.	12.6	30
17 Number of Kernel Rows	1.2	30	17 No. Kernel Rows	1.2	30
26.9 Number of Kernels per Row	1.2	15	18.9 No. Kernels per Row	1.2	15
12.0 cm Shank Length	2.6	30	09.3 cm Shank Length	1.9	30
7. KERNEL (Dried):	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
10.4 mm Kernel Length	0.5	15	10.4 mm Kernel Length	0.5	15
07.0 mm Kernel Width	0.3	15	07.8 mm Kernel Width	0.2	15
2 Hard Endosperm Color 2.5Y7/10 1 = White (ex. Munsell Code 5Y 9/1 or 2.5Y 8.5/2) 2 = Yellow (ex. Munsell Code 2.5Y 8/10 or 7.5YR 7/14) 3 = Other (specify_____)			2 Hard Endosperm Color 2.5Y7/10		
1 Endosperm Type 1 = Normal Starch; 2 = High Amylose Starch 3 = Waxy Starch; 4 = High Protein 5 = High Lysine; 6 = High Oil 7 = Other _____			1 Endosperm Type		
19.6 gm Weight per 100 Kernels (unsized sample)	0.3	15	25.3 gm Kernel Wt.	0.6	15
8. COB:	Standard Deviation	Sample Size	Mean	Standard Deviation	Sample Size
25.9 mm Cob Diameter at mid-point	1.1	30	23.3 mm Cob Diameter	1.1	30
1 Cob Color N/9.25 1 = White (ex. Munsell 5Y 9/1 or 2.5Y 8.5/2) 2 = Pink (ex. Munsell 2.5R 7/6 or 5R 5/6) 3 = Red (ex. Munsell 2.5R 4/8 or 10RP 4/8) 4 = Other (describe _____)			4 Cob Color 10R4/8 Dark Reddish Orange		

9. DISEASE RESISTANCE of the variety per se. Name the disease, the causative organism, the races or strains, and the resistance rating (rate from 1 (most susceptible) to 9 (most resistant). Trials should be conducted with resistant and susceptible check varieties, and ensure that adequate disease pressure is present in the trial (such as with inoculations or heavy disease pressure).
EXAMPLE: 7 Helminthosporium Leaf Spot (*Bipolaris zeicola*) Race _2_

Application Variety Data	Comparison Variety Data
7 Eyespot (Kabatiella zeae)	5 Eyespot (Kabatiella zeae)
5 Gray Leaf Spot (Cercospora zeae-maydis)	6 Gray Leaf Spot (Cercospora zeae-maydis)
5 Southern Leaf Blight (Bipolaris maydis)	6 Southern Leaf Blight (Bipolaris maydis)
7 Goss's Wilt (Clavibacter michiganense spp. nebrsakense)	5 Goss's Wilt (Clavibacter michiganense spp. nebrsakense)

DISEASE RESISTANCE of the comparison variety per se. Rate the same diseases as tested for the application variety.

Application Variety Data	Comparison Variety Data
10. INSECT RESISTANCE of the variety per se: Name the insect, give its scientific name, and the resistance rating (rate from 1 (most susceptible) to 9 (most resistant). Trials should be conducted with resistant and susceptible check varieties, and ensure that adequate insect pressure is present in the trial (such as with inoculations or heavy insect pressure). EXAMPLE: European Corn Borer (*Ostrinia nubilalis*) 7 1st Generation (Typically Whorl Leaf Feeding)	INSECT RESISTANCE of the comparison variety per se: Rate the same insects as tested for the application variety.
11. MOLECULAR MARKERS: (1 = data available but not supplied; 2 = data supplied) 2 Isozymes __ RFLP's __ RAPD's __ SSRs __ SNPs 1 Other (Specify) SNP &/or SSR	**11. MOLECULAR MARKERS** 2 Isozymes __ RFLP's __ RAPD's __ SSRs __ SNPs 1 Other SNP &/or SSR
12. AGRONOMIC TRAITS: Please place hybrid performance data in Exhibit D if desire to report it. __ND__ Kg/ha Yield of Variety Per Se (at grain maturity)	**12. AGRONOMIC TRAITS** __ND__ Kg/ha Yield of Variety Per Se
Application Variety Data	Comparison Variety Data

REFERENCES:

Butler, D.R. 1954. *A System for the Classification of Corn Inbred Lines.* PhD Thesis. Ohio State University.
Emerson, R.A., G.W. Beadle, and A.C. Fraser. 1935. *A Summary of Linkage Studies in Maize.* Cornell A.E.S., Mem. 180.
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Inglett, G.E. (Ed.) 1970. *Corn: Culture, Processing, Products.* Avi Publishing Company, Westport, CT.
Jugenheimer, R.W. 1976. *Corn: Improvement, Seed Production, and Uses.* John Wiley & Sons, New York.
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Munsell Color Chart for Plant Tissues. Macbeth. P.O. Box 230, Newburgh, NY 12551-0230.
The Mutants of Maize. 1968. Crop Science Society of America, Madison, WI.
Shurtleff, M.C. 1980. *Compendium of Corn Diseases.* APS Press. St. Paul, MN. 105 pp.
Sprague, G.F., and J.W. Dudley (Editors). 1988. *Corn and Corn Improvement.* Third Edition. Agronomy Monograph 18. ASA, CSSA, SSSA, Madison, WI.
Stringfield, G.H. *Maize Inbred Lines of Ohio.* Ohio A.E.S., Bul. 831. 1959.
UPOV publications can be accessed at http://www.upov.int/en/publications/tg_rom/tg_index.html (look for "maize")
U.S. Department of Agriculture. 1936. 1937. Yearbook.

COMMENTS: (e.g., state how heat units were calculated, report any traits not listed on the form, and/or where data was collected. Continue in Exhibit D.)

The typical Heat Units calculation described in the exhibit C instructions was used in this exhibit.

ND=Not Determined

5. Tassel - Anther and Glume of application variety Green with reddish purple stripes. Comparison variety Glume -Green with reddish purple stripes.

7. Kernel data, for line applying for plant variety protection, taken using seed from same seed lot as that sent to deposit. All other data trial location and date listed above.

Inbred Seed source from Syngenta Seeds, Inc., NP2536, PVP certificate 200600095; US Patent 7,534,942 is a proprietary line from Syngenta seed source 07PS2136766.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Syngenta Crop Protection AG		NPID3216
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
Schwarzwaldelle 215 Basel Switzerland 4058	+41 61 323 11 11	+41 61 323 12 12
	7. PVPO NUMBER PV# 201100429	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☒ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☐ **YES** ☒ **NO**

10. Is the applicant the original owner? ☒ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ **YES** ☒ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

The answer to 9 and 10b is Switzerland.
The variety for which Plant Variety Protection is hereby sought was developed by an employee, Scott Kelly, of Syngenta Seeds, Inc. By agreement between the employee and Syngenta Seeds, Inc. all right to any invention, discovered or development made by the employee while employed by Syngenta Seeds, Inc. are assigned to the Syngenta Crop Protection A.G. with no right of any kind retained by the employee.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

7/20/2011

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Syngenta Crop Protection ~~A.G.~~ AG	Schwarzwaldelle 215 Basel Switzerland 4058	VARIETY NAME NPID3216
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS** *(Street and No. or RD No., City, State, and Zip Code and Country)*	FOR OFFICIAL USE ONLY
Dana Rewoldt	PO Box 500 Slater IA 50244	PVPO NUMBER PV# 201100429

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Dwight Bits
Signature

7-19-11
Date

7/20/2011