



## APPLICATIONS UNDER EXAMINATION

CORN

### CORN (*Zea mays*)

**Proposed denomination:** 'PH25KM'  
**Application number:** 17-9184  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Michael Chandler, Pioneer Hi-Bred International, Inc., Janesville, Wisconsin, United States of America  
Matthew Smalley, Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America

**Variety used for comparison:** 'PHF0D'

**Summary:** *The plants of 'PH25KM' are taller than those of 'PHF0D'. 'PH25KM' has a shorter ear than that of 'PHF0D'. The kernel type is dent-like for 'PH25KM' whereas it is dent for 'PHF0D'.*

#### Description:

PLANT: inbred yellow corn variety, no plants with ear wings

TASSEL: anthesis occurs late, moderately dense spikelets, short to medium length main axis above lowest lateral branch, long main axis above highest lateral branch

LATERAL BRANCHES: absent or very few primary lateral branches on main axis of tassel

GLUME: absent or very weak intensity of anthocyanin colouration at base, weak intensity of anthocyanin colouration at tip and on body

ANTHER: absent or very weak to weak intensity of anthocyanin colouration

EAR: mid to late season silk emergence, absent or very weak intensity of anthocyanin colouration of silks, medium to long husk (extends one quarter to one third the length of ear above tip), conico-cylindrical shape, weak to medium intensity of anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH25KM' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2006 in Salinas, Puerto Rico using a double haploid plant breeding method. In 2006, the F1 generation was planted, self-pollinated and harvested in bulk. The F2 generation underwent a haploidization process in Puerto Vallarta, Mexico in 2007. The haploids were doubled, self-pollinated and ears were harvested in 2008 near Buin, Chile. From 2008 to 2010, the subsequent D1 to D3 generations were self-pollinated and harvested in bulk. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Janesville, Wisconsin, USA and wide area testing was done in Canada and the USA from 2008 to 2010.

**Tests and Trials:** The comparative trial for 'PH25KM', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 23 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-tests. Results were supported by the official technical examination report 201700173, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.

Comparison table for 'PH25KM'

	'PH25KM'	'PHF0D'*
<i>Plant height (including tassel) (m)</i>		
mean	2.00	1.92
std. deviation	0.07	0.11
<i>Ear length (cm)</i>		
mean	12.83	13.88
std. deviation	1.21	1.91

\*reference variety



Corn: 'PH25KM' (top) with reference variety 'PHF0D' (bottom)

**Proposed denomination:** 'PH25VF'  
**Application number:** 17-9185  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Steve Szalma, Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America

**Variety used for comparison:** 'PH13A4'

**Summary:** *The tassel of 'PH25VF' has a medium sized to large angle between the main axis and lateral branches whereas 'PH13A4' has a small to medium sized angle between the main axis and lateral branches. The lateral branches on the tassel of 'PH25VF' are slightly to moderately recurved whereas the lateral branches on the tassel of 'PH13A4' are straight. The plants of 'PH25VF' are taller than those of 'PH13A4'. 'PH25VF' has a long husk that extends one third the length of the ear above the tip whereas 'PH13A4' has a medium length husk that extends one quarter the length of the ear above the tip. When including the kernels, the diameter at the middle of the ear of 'PH25VF' is smaller than that of 'PH13A4'. The ear of 'PH25VF' has a cylindrical shape whereas the ear of 'PH13A4' has a conico-cylindrical shape.*

**Description:**

PLANT: inbred yellow corn variety, no plants with ear wings

TASSEL: anthesis occurs early to mid-season, medium sized to large angle between main axis and lateral branches during anthesis, moderately dense spikelets, short to medium length main axis above lowest lateral branch, medium to long main axis above highest lateral branch

LATERAL BRANCHES: few on main axis of tassel, slightly to moderately recurved

GLUME: absent or very weak intensity of anthocyanin colouration at base, weak to medium intensity of anthocyanin colouration at tip and on body

ANTHER: absent or very weak to weak intensity of anthocyanin colouration

EAR: early silk emergence, absent or very weak intensity of anthocyanin colouration of silks, long husk (extends one third length of ear above tip), cylindrical shape, weak to medium intensity of anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH25VF' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2006 in Eau Claire, Wisconsin, USA using a double haploid plant breeding method. The F1 generation underwent a haploidization process in Kekaha, Kauai, Hawaii, USA in 2007. The haploids were doubled, self-pollinated and ears were harvested near Buin, Chile in 2007. From 2008 to 2010, the subsequent D1 to D3 generations were self-pollinated and ears were harvested in bulk. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Willmar, Minnesota, USA and wide area testing was done in Canada and the USA from 2008 to 2010.

**Tests and Trials:** The comparative trial for 'PH25VF', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on 30 measurements. Mean differences were significant at the 5% probability level based on paired Student's T-tests. Results were supported by the official technical examination report 201700176, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.



Comparison table for 'PH25VF'

	'PH25VF'	'PH13A4'*
<i>Plant height (including tassel) (m)</i>		
mean	1.92	1.84
std. deviation	0.10	0.08
<i>Ear diameter (in middle including kernels) (cm)</i>		
mean	3.87	4.22
std. deviation	0.16	0.19

\*reference variety



Corn: 'PH25VF' (top) with reference variety 'PH13A4' (bottom)

**Proposed denomination:** 'PH25Y1'  
**Application number:** 17-9186  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Lori Carrigan, Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America

**Variety used for comparison:** 'PH1MBC'

**Summary:** *During anthesis, the anthocyanin colouration at the base of the glume of 'PH25Y1' is of medium intensity whereas it is absent or very weak at the base of the glume of 'PH1MBC'. The intensity of anthocyanin colouration at the tip and glume body of 'PH25Y1' is strong to very strong whereas it is of medium intensity at the tip and glume body of 'PH1MBC'. The intensity of anthocyanin colouration of the silks of 'PH25Y1' is medium to strong whereas it is absent or very weak in 'PH1MBC'. At the end of anthesis, the main axis above the highest lateral branch is very short to short on the tassel of 'PH25Y1' whereas it is of medium length on the tassel of 'PH1MBC'. The plants of 'PH25Y1' are shorter than those of 'PH1MBC'. When including the kernels, the diameter at the middle of the ear of 'PH25Y1' is smaller than that of 'PH1MBC'. The ear of 'PH25Y1' has a conico-cylindrical shape whereas the ear of 'PH1MBC' has a cylindrical shape.*

**Description:**

PLANT: inbred yellow corn variety, absent to low frequency of plants with ear wings

TASSEL: anthesis occurs early to mid-season, small angle between main axis and lateral branches during anthesis, medium to moderately dense spikelets, long to very long main axis above lowest lateral branch, very short to short main axis above highest lateral branch

LATERAL BRANCHES: medium number to many on main axis of tassel, slightly recurved

GLUMES: medium intensity of anthocyanin colouration at base, strong to very strong anthocyanin colouration at tip and on body

ANTHERS: absent or very weak intensity of anthocyanin colouration.

EAR: early to mid-season silk emergence, medium to strong intensity of anthocyanin colouration of silks, medium length husk (extends one quarter length of ear above tip), conico-cylindrical shape, very short ear wings, weak anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH25Y1' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2006 in Kekaha, Kauai, Hawaii, USA using a pedigree plant breeding method. In 2007, the F1 generation was planted, self-pollinated and harvested in bulk near Willmar, Minnesota, USA whereas the F2 population was self-pollinated and ears were selected in 2008. In 2009, F3 families were self-pollinated and ears were selected near Willmar, Minnesota. From 2010 to 2013, the subsequent F4 to F7 generations were also self-pollinated and ears selected in Willmar, Minnesota and Puerto Vallarta, Mexico until the F8 generation when the ears were bulked as breeder seed. Selection criteria included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Willmar, Minnesota, USA and wide area testing was done in Canada and the USA from 2008 to 2010.

**Tests and Trials:** The comparative trial for 'PH25Y1', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 29 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-tests. Results were supported by the official technical examination report 201700177, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.

## Comparison table for 'PH25Y1'

	'PH25Y1'	'PH1MBC'*
<i>Plant height (including tassel) (m)</i>		
mean	1.63	1.76
std. deviation	0.10	0.08
<i>Ear diameter (in middle including kernels) (cm)</i>		
mean	3.97	4.19
std. deviation	0.12	0.28

\*reference variety



Corn: 'PH25VF' (top) with reference variety 'PH13A4' (bottom)

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**Proposed denomination:** 'PH2FV2'  
**Application number:** 17-9180  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Michael Chandler, Pioneer Hi-Bred International, Inc., Janesville, Wisconsin, United States of America

**Variety used for comparison:** 'PHEJW'

**Summary:** *The anthocyanin colouration on the anther of 'PH2FV2' is of weak intensity whereas it is of medium to strong intensity on the anther of 'PHEJW'. The intensity of anthocyanin colouration of the silks of 'PH2FV2' is strong whereas it is very weak to medium in 'PHEJW'. 'PH2FV2' has a longer ear than that of 'PHEJW'. When including the kernels, the diameter at the middle of the ear of 'PH2FV2' is smaller than that of 'PHEJW'. The top and dorsal side of the kernel on 'PH2FV2' is yellow whereas it is yellow orange on 'PHEJW'. The kernel type is dent-like for 'PH2FV2' whereas it is flint-like for 'PHEJW'.*

**Description:**

PLANT: inbred yellow corn variety, absent to low frequency of plants with ear wings

TASSEL: anthesis occurs very late in season, medium density of spikelets, very short main axis above lowest lateral branch, short to medium length of main axis above highest lateral branch

LATERAL BRANCHES: absent or very few on main axis of tassel

GLUME: absent or very weak to weak intensity of anthocyanin colouration at base, weak to medium intensity of anthocyanin colouration at tip and on body

ANTHER: weak intensity of anthocyanin colouration

EAR: late silk emergence, strong intensity of anthocyanin colouration of silks, medium length husk (extends one quarter length of ear above tip), conico-cylindrical shape, very short ear wings, weak anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH2FV2' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2004 in Algoma, Iowa, USA using a double haploid plant breeding method. The F1 generation underwent a haploidization process in Marian, Iowa, USA in 2005. The haploids were doubled, self-pollinated and ears were harvested near Kekaha, Kauai, Hawaii, USA in 2006. From 2010 to 2011, the subsequent D1 to D3 generations were self-pollinated and harvested in bulk. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Janesville, Wisconsin, USA and wide area testing was done in Canada and the USA from 2010 to 2011.

**Tests and Trials:** The comparative trial for 'PH2FV2', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 26 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-tests. Results were supported by the official technical examination report 201700153, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.



Comparison table for 'PH2FV2'

	'PH2FV2'	'PHEJW'*
<i>Ear length (cm)</i>		
mean	15.87	14.80
std. deviation	0.86	1.47
<i>Ear diameter (in middle including kernels) (cm)</i>		
mean	3.79	4.01
std. deviation	0.18	0.19

\*reference variety



Corn: 'PH2FV2' (top) with reference variety 'PHEJW' (bottom)



**Proposed denomination:** 'PH2G4Y'  
**Application number:** 17-9181  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Steven King, Pioneer Hi-Bred Production Company, Woodstock, Ontario

**Variety used for comparison:** 'PHWHE'

**Summary:** *The tassel of 'PH2G4Y' has none or very few to few lateral branches whereas the tassel of 'PHWHE' has a medium number of lateral branches. At the end of anthesis, the main axis above the highest lateral branch is very long on the tassel of 'PH2G4Y' whereas it is short on the tassel of 'PHWHE'. When including the kernels, the diameter at the middle of the ear of 'PH2G4Y' is smaller than that of 'PHWHE'.*

**Description:**

PLANT: inbred yellow corn variety, low frequency of plants with ear wings

TASSEL: anthesis occurs very early to early in season, very small to small angle between main axis and lateral branches during anthesis, moderately dense spikelets, long main axis above lowest lateral branch, very long main axis above highest lateral branch

LATERAL BRANCHES: absent or very few to few on main axis of tassel, slightly recurved

GLUME: absent or very weak intensity of anthocyanin colouration at base, weak intensity of anthocyanin colouration at tip and on body

ANTHER: weak intensity of anthocyanin colouration

EAR: very early silk emergence, absent or very weak intensity of anthocyanin colouration of silks, conico-cylindrical shape, very short ear wings, weak to medium intensity of anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top, yellow orange on dorsal side

**Origin and Breeding:** 'PH2G4Y' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2007 in Moorhead, Minnesota, USA using a double haploid plant breeding method. In 2007, the F1 generation was planted, self-pollinated and harvested in bulk in Puerto Vallarta, Mexico. The F2 generation underwent a haploidization process near Woodstock, Ontario, Canada in 2008. The haploids were doubled, self-pollinated and ears were harvested near Buin, Chile in 2008. From 2009 to 2011, the subsequent D1 to D3 generations were self-pollinated and harvested in bulk. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Woodstock, Ontario and wide area testing was done in Canada and the USA from 2009 to 2011.

**Tests and Trials:** The comparative trial for 'PH2G4Y', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 29 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-tests. Results were supported by the official technical examination report 201700157, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.

**Comparison table for 'PH2G4Y'**

	'PH2G4Y'	'PHWHE'*
<i>Ear diameter (in middle including kernels) (cm)</i>		
mean	3.81	3.95
std. deviation	0.15	0.18
*reference variety		



Corn: 'PH2G4Y' (top) with reference variety 'PHWHE' (bottom)

**Proposed denomination:** 'PH2G60'  
**Application number:** 17-9182  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Gustavo Garcia, Pioneer Hi-Bred Production Company, Woodstock, Ontario  
Travis Coleman, Pioneer Hi-Bred Production Company, Lethbridge County, Alberta

**Varieties used for comparison:** 'PHWNS' and 'PH2TCG'

**Summary:** *During anthesis, the intensity of anthocyanin colouration at the base of the glume of 'PH2G60' is absent or very weak whereas it is weak at the base of the glume of 'PH2TCG'. The intensity of anthocyanin colouration of the anther of 'PH2G60' is strong whereas it is very strong on the reference varieties. The tassel of 'PH2G60' has a very small to medium sized angle between the main axis and lateral branches whereas that of 'PH2TCG' has a large angle between the main axis and lateral branches. The tassel of 'PH2G60' has none or very few lateral branches whereas the tassel of both reference varieties have a few to a medium number of lateral branches. The silks emerge early for 'PH2G60' while the silks emerge mid to late season for 'PH2TCG'. The intensity of anthocyanin colouration of the silks of 'PH2G60' is strong whereas it is weak in 'PHWNS' and absent to very weak in 'PH2TCG'. At the end of anthesis, the main axis above the lowest lateral branch is short on the tassel of 'PH2G60' whereas it is medium to long on the tassel of 'PHWNS' and very long on the tassel of 'PH2TCG'. When including the kernels, the diameter at the middle of the ear of 'PH2G60' is smaller than that of the reference varieties.*

**Description:**

PLANT: inbred yellow corn variety, no plants with ear wings

TASSEL: anthesis occurs early to mid-season, small to medium sized angle between main axis and lateral branches during anthesis, moderately dense to very dense spikelets, short main axis above lowest lateral branch, medium to long main axis above highest lateral branch

LATERAL BRANCHES: absent or very few on main axis of tassel, straight

GLUME: absent or very weak intensity of anthocyanin colouration at base, weak to medium intensity of anthocyanin colouration at tip and on body

ANTHER: strong intensity of anthocyanin colouration

EAR: early silk emergence, strong intensity of anthocyanin colouration of silks, conico-cylindrical shape, weak to medium intensity of anthocyanin colouration of cob glumes

KERNEL: dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH2G60' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2008 in Moorhead, Minnesota, USA using a double haploid plant breeding method. The F1 generation underwent a haploidization process in Oahu, Hawaii, USA in 2009. The haploids were doubled, self-pollinated and ears were harvested in 2009. From 2010 to 2012, the subsequent D1 to D3 generations were self-pollinated and harvested in bulk near Buin, Chile and Woodstock, Ontario, Canada. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Woodstock, Ontario and wide area testing was done in Canada and the USA from 2011 to 2012.

**Tests and Trials:** The comparative trial for 'PH2G60', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 29 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-Tests. Results were supported by the official technical examination report 201700161, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.



Comparison table for 'PH2G60'

	'PH2G60'	'PHWNS'*	'PH2TCG'*
Ear diameter (in middle including kernels) (cm)			
mean	3.85	4.29	4.16
std. deviation	0.18	0.22	0.17

\*reference varieties



Corn: 'PH2G60' (top) with reference varieties 'PHWNS' (centre) and 'PH2TCG' (bottom)

**Proposed denomination:** 'PH2TCG'  
**Application number:** 17-9183  
**Application date:** 2017/04/21  
**Applicant:** Pioneer Hi-Bred International, Inc., Johnston, Iowa, United States of America  
**Agent in Canada:** Pioneer Hi-Bred Production Co., Lethbridge County, Alberta  
**Breeder:** Suzanne Mickelson, Pioneer Hi-Bred International, Inc., Janesville, Wisconsin, United States of America  
 Edwin Grote, Pioneer Hi-Bred International, Inc., Janesville, Wisconsin, United States of America

**Varieties used for comparison:** 'PHWDM' and 'PH2G60'

**Summary:** *During anthesis, the intensity anthocyanin colouration at the base of the glume of 'PH2TCG' is weak whereas it is absent or very weak at the base of the glume of the reference varieties. The anthocyanin colouration at the tip and glume body of 'PH2TCG' is of weak to medium intensity whereas it is of medium to strong intensity at the tip and glume body of 'PHWDM'. The intensity of anthocyanin colouration of the anther of 'PH2TCG' is very strong whereas it is strong on 'PH2G60' and weak on 'PHWDM'. The tassel of 'PH2TCG' has a few to a medium number of lateral branches whereas the tassel of 'PH2G60' has none or very few lateral branches. The silks emerge mid to late season for 'PH2TCG' while the silks emerge early for 'PH2G60'. The intensity of anthocyanin colouration of the silks of 'PH2TCG' is absent to very weak whereas it is strong in 'PH2G60'. The tassle of 'PH2TCG' has a medium density of spikelets whereas the tassel of 'PHWDM' has moderately dense spikelets and the tassel of 'PH2G60' has moderately dense to very dense spikelets. When including the kernels, the diameter at the middle of the ear of 'PH2TCG' is larger than that of the reference varieties.*

#### **Description:**

**PLANT:** inbred yellow corn variety, absent to low frequency of plants with ear wings

**TASSEL:** anthesis occurs mid-season, large angle between main axis and lateral branches during anthesis, medium density of spikelets, very long main axis above lowest lateral branch, medium to long main axis above highest lateral branch

**LATERAL BRANCHES:** few to medium number on main axis of tassel, slightly recurved

**GLUME:** weak intensity of anthocyanin colouration at base, weak to medium intensity of anthocyanin colouration at tip and on body

**ANTHER:** very strong intensity of anthocyanin colouration

**EAR:** mid to late season silk emergence, absent or very weak intensity of anthocyanin colouration of silks, medium length husk (extends one quarter length of ear above tip), conico-cylindrical shape, very short ear wings, weak to medium intensity of anthocyanin colouration of cob glumes

**KERNEL:** dent-like type, yellow on top and dorsal side

**Origin and Breeding:** 'PH2TCG' was developed by Pioneer Hi-Bred International, Inc. from the cross between proprietary inbred lines made in 2009 in Arica, Chile using a double haploid plant breeding method. The F1 generation underwent a haploidization process in Arica, Chile in 2010. The haploid were doubled, self-pollinated and ears were harvested in 2010. From 2011 to 2013, the subsequent D1 to D3 generations were self-pollinated and harvested in bulk. Selection criteria used in the advancement process included yield per se, yield in hybrid combination, tassel size, pollen production, stalk lodging resistance, late season plant health, grain quality, as well as disease and insect resistance. Yield trials were grown in Janesville, Wisconsin, USA and wide area testing was done in Canada and the USA from 2011 to 2012.

**Tests and Trials:** The comparative trial for 'PH2TCG', conducted in Woodstock, Ontario during the 2017 growing season, was planted in a complete randomized design and consisted of 3 replicates. Plots consisted of one row 3 metres in length with a row spacing of 76 cm. Each plot had approximately 20 plants per replicate for a total of 50 to 60 plants per variety. Measured characteristics were based on a minimum of 29 measurements. Mean differences were significant at the 5% probability level based on unpaired Student's T-tests. Results were supported by the official technical examination report 201700165, purchased from the Plant Variety Protection Office, Beltsville, Maryland, USA.

Comparison table for 'PH2TCG'

	'PH2TCG'	'PHWDM'*	'PH2G60'*
Ear diameter (in middle including kernels) (cm)			
mean	4.16	3.87	3.85
std. deviation	0.17	0.20	0.18

\*reference varieties



Corn: 'PH2TCG' (bottom) with reference varieties 'PHWDM' (centre) and 'PH2G60' (top)